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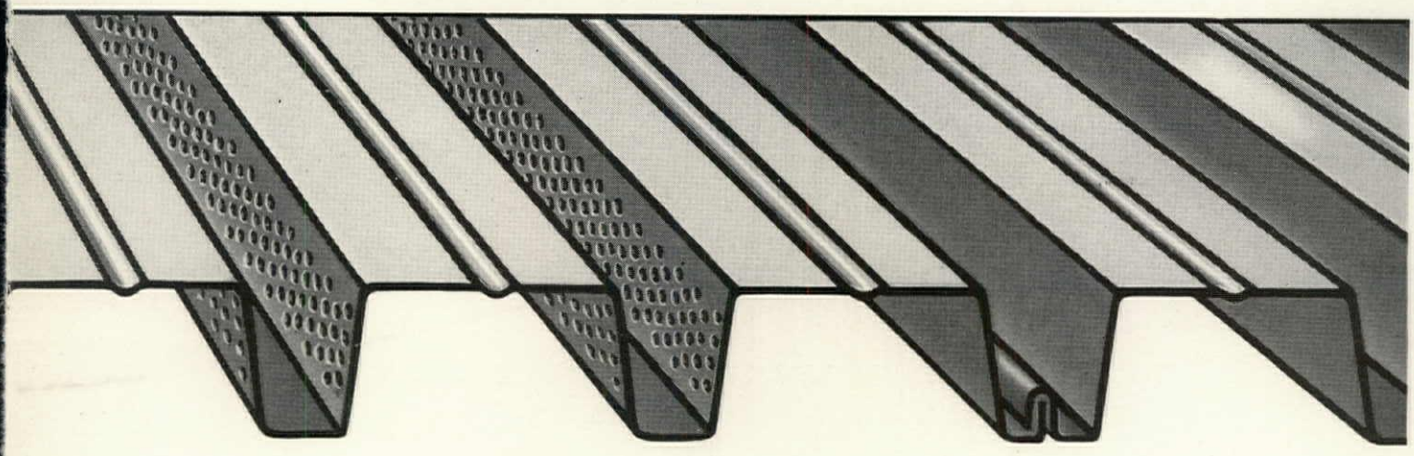


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Publisher's note

Important changes are being made in the way FORUM looks and operates.

This page, for example. The table of contents has been redesigned to make room for a monthly report like this from the publisher's office. It will take readers behind the scenes with the 29 members of FORUM's editorial staff to see the activities which back up FORUM's pages.

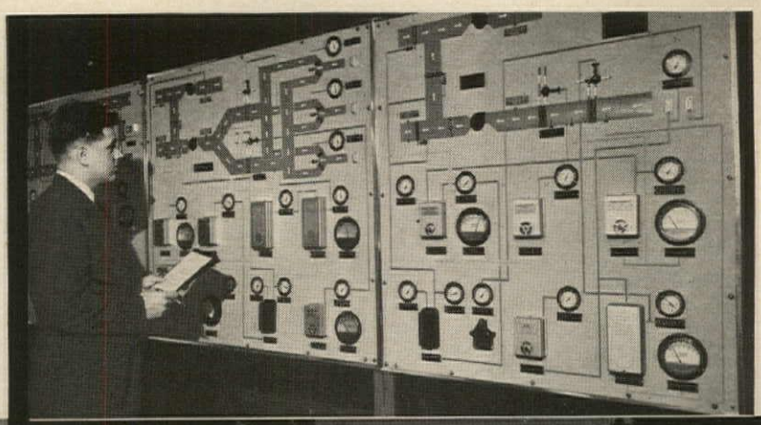
On the masthead—on page 85—appear much more important changes. It reveals that Joseph C. Hazen Jr. has been promoted to associate publisher, an office to which he brings the benefits of long experience in journalism and building. Hazen joined FORUM as an associate editor two years after his graduation from Princeton's architectural school in 1935 and has been FORUM's managing editor since 1950.

The masthead also reveals that the new managing editor is Peter Blake, who moved up into this position on July 1 after 11 years as an associate editor. Trained in architecture at the University of Pennsylvania and Pratt Institute, Blake became a registered architect in 1957 and has practiced notable architecture ever since. Concurrently he has distinguished himself in many related fields: as curator of architecture for New York City's Museum of Modern Art, as a contributor to *Harpers, Harpers Bazaar, Saturday Review of Literature,* and *The New York Times,* as the author of numerous books (most recent: *The Master Builders*), as visiting critic to the schools of architecture at Cornell, Yale, and Pratt, as designer of architecture exhibits for the State Department at the recent fairs in Moscow and Berlin, and, of course, as a prolific writer for FORUM. Henceforth, Blake will devote all of his time and talent to FORUM.

On the last page of the magazine another important change appears. There Editor Douglas Haskell, dean of U.S. architectural editors, will bring to readers each month his salty observations on the state of architecture and building, by-products of his frequent reconnaissance trips for FORUM through the U.S. and abroad. (Incidentally, two of Haskell's recent trips were made for higher purposes: to Oberlin at commencement time to receive an honorary Doctorate of Fine Arts, and to London in July to be honored—along with AIA President Philip Will—by the Brazilian government at the Congress of the International Union of Architects.)

In future columns, more about FORUM's editorial staff. —R.D.P. Jr.

Behind the scenes, Johnson graphic panels simplify the supervision and control of air conditioning equipment. Temperatures in administrative areas and doctors' offices are individually controlled by the occupants.

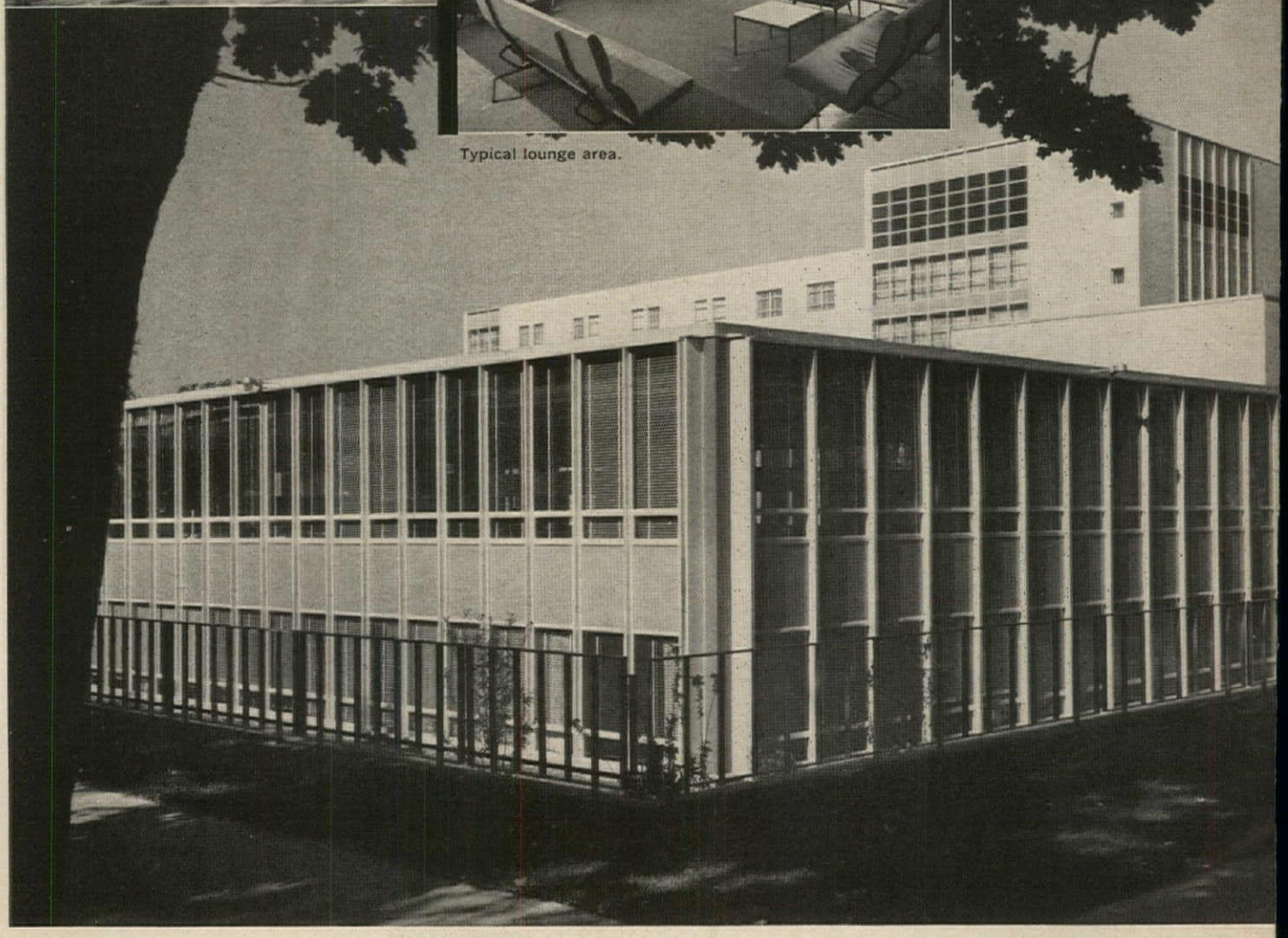


The Occupational Therapy Building includes a gymnasium-auditorium, model kitchen, workshop, library, snack bar, and beauty shop. It is rated among the best in the nation.

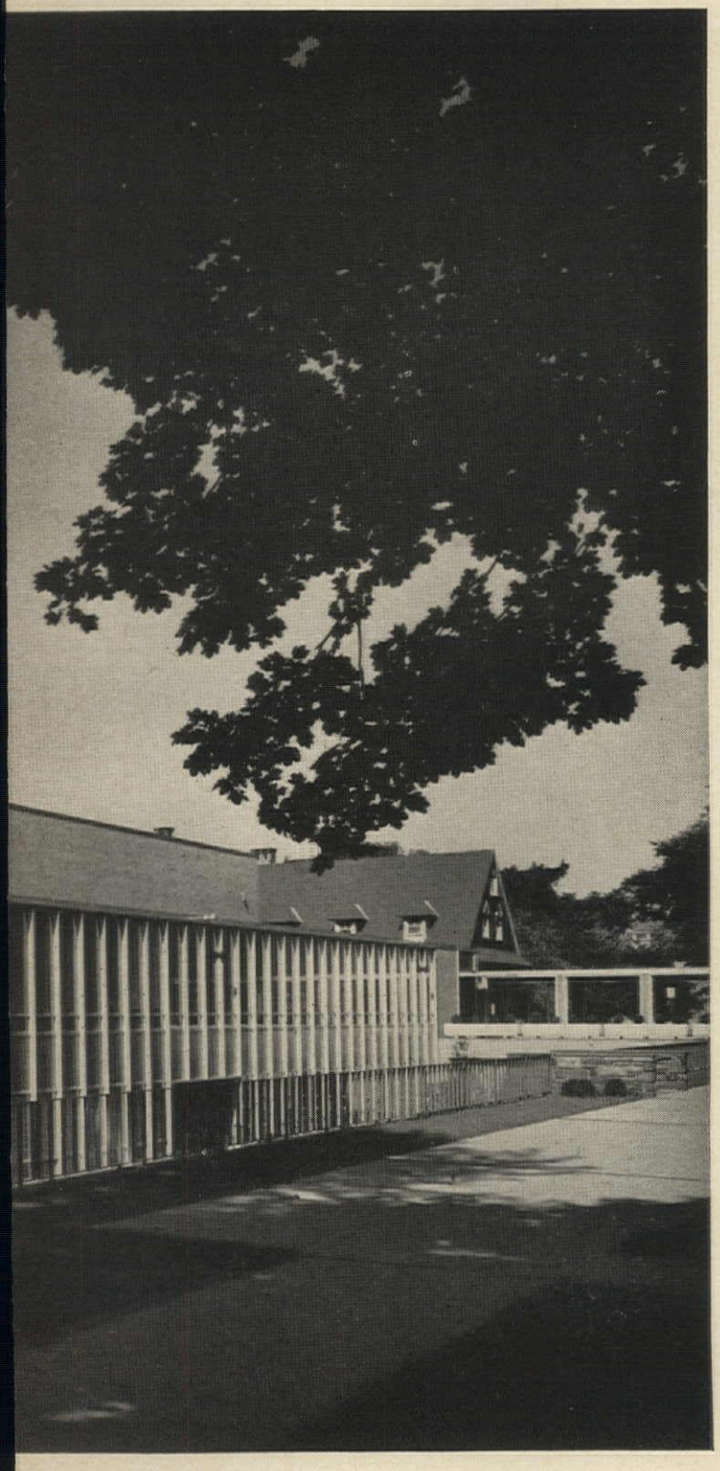




Typical lounge area.



North Building, Pennsylvania Hospital, Philadelphia. Martin, Stewart & Noble, architects; Robert Allan Class, associate architect; A. E. D'Ambly, mechanical engineer; Stofflet & Tillotson Corp., general contractor; Williard, Inc., mechanical contractor; all of Philadelphia.



controlled environment aids in mental care

Planned and equipped to utilize the latest concepts in psychiatric care, the new North Building of Pennsylvania Hospital, Philadelphia, is one of the outstanding institutions in its field. Actually, North "Building" consists of two buildings — the 5-story Patients' Building and the Occupational Therapy Building.

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President spurs civil defense program and Congress grants new appropriations

After a decade of apathy and confusion, President Kennedy last month raised the country's civil defense program to a high priority status. "In the coming months, I hope to let every citizen know what steps he can take without delay to protect his family in case of attack," the President told the nation in his speech on the Berlin crisis. By executive order, he transferred responsibility for "a greatly accelerated civil defense effort, including a nationwide fallout shelter program" from the Office of Civil and Defense Mobilization to the Department of Defense. The President immediately asked Congress to tack a $207.6 million appropriation to the $104.2 million civil defense budget already requested earlier this year.

Both Houses of Congress passed the bill within days, evidence that the Berlin crisis and nuclear warfare statistics have finally gotten through to the law-makers who have cut civil defense appropriation requests by 74 per cent since 1950. Until recently, the annual budget allowed the OCDM was only about $53 million. Since the President's Berlin speech, Congressmen have received a flood of constituent inquiries. Even former critics of earlier civil defense programs such as Representative Chet Holifield, chairman of the House Military Operations Subcommittee, responded to the executive appeal. Urging the Pentagon to decide on a five-year program by next January, Representative Holifield (D, Calif.) said: "I had hoped the first step would be longer, but it may be the right size for the present comprehension of Congress . . . . We cannot depend on voluntary shelter building to get an effective civil defense." There were still some recalcitrants, such as Representative Albert Thomas (D, Tex.), who heads the House Appropriations subcommittee on independent offices. For the third time, Thomas and his subcommittee turned down the GSA this year on requests for funds to provide shelters in 20 new federal buildings. Thomas stated last month that he still thinks the GSA request is a "boondoggle."

Reports coming from Russia meanwhile indicated how far behind the U. S. civil defense program has fallen. This year, the USSR will spend over four times our outlay on nuclear protection even with the new appropriations. Last year alone, the Russians spent more than U.S. expenditures in the last decade and Russian fallout shelters are building apace in underpasses and beneath city streets. One hundred million Soviets have already received a minimum of 20 hours civil defense training in alert, shelter, and evacuation techniques.

Pentagon officials told Congress that their greatest need is for architects and engineers trained in shelter design and installation. Former OCDM Chief Frank Ellis testified before the House Civil Defense subcommittee that the federal program will also include efforts to encourage private citizens to build their own home shelters, but it was still too early to see what federal aid or tax incentives would be provided. FHAdministrator Neal J. Hardy announced that fallout shelters will be eligible for insured loans under the new Housing Bill's home-improvement program but until the FHA amends its minimum improvement-loan requirements ($2,500), the average shelter costing around $800 will not qualify. Although the FHA's lending policy for shelters under the Title I program has been somewhat cautious (loans are handled only on direct application of the borrower to avoid the possibility of scare-selling by either contractors or dealers), a total of 265 fallout shelter loans were made last year. Of these, 70 per cent were made in the four southwestern states of Texas, Oklahoma, Kansas, and Arkansas, where property owners were in a receptive mood because shelters could double as cyclone cellars.

With the proper incentives, many architects believed that builders would cooperate in the program. Architect Max M. Simon, who has designed more than 1,000 apartment buildings in the New York area, suggested shelter costs could be included in the over-all apartment house mortgages insured by FHA. He also proposed that the government establish shelter construction standards including equipment and wall thickness specifications. "The inducement of amortizing the cost of a shelter over the term of a mortgage could hardly be resisted by builders," he told the N.Y. *Times*. "It would be the surest and easiest way of starting a trend that would eventually see a fallout shelter in every new building."

Although the $311.8 million survival program still falls short of the multi-billion-dollar programs advocated by New York's Governor Rockefeller and former Ford Foundation President H. Rowan Gaither Jr., Defense Secretary Robert McNamara and his aides told Congress that the appropriation will cover a first-year effort and will not rule out future long-range planning. A total of $169 million will go toward the shelter program and almost half of all the additional funds sought ($93 million) will be awarded in contracts to architectural firms by the Corps of Army Engineers and the Navy's Bureau of Yards and Docks for surveys to identify and mark shelter areas in existing government and private office buildings, factories, schools, and

continued on page 7

SULLIVAN ART SAVED

Although preservationists lost their battle last November to save Chicago's historic Garrick Theater designed by Louis Sullivan, a joint effort by the Chicago Landmarks Commission and Chicago chapters of the AIA and Society of Architectural Historians is working around the clock to save as much ornament as possible from the 68-year-old building. A team, headed by Richard Nickel, discovered unknown examples of Sullivan's stencil and mosaic work behind layers of paint or tile. Lacking time to remove the delicate mosaics piecemeal, stone masons removed entire floor sections weighing several tons each (below). Whole wall sections of rare stencilwork were also removed to be restored. When restoration is completed, Sullivan's rescued designs will be sent on a tour of museums and universities in the United States.





McCormick Place — Chicago's multi-million dollar lake front show place



Back stage view of McCormick Place theatre showing some of the MAJOR borderlights, spots and floodlights

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churches. The survey, a first step in coordinating widely disparate state and city efforts, will concentrate first on critical urban areas and is expected to be completed by December '62. One hundred Defense Dept. personnel began training at Fort Belvoir, Va. last month for supervisory jobs. Most of the rest of the additional funds President Kennedy requested will go toward developing an individual home warning device and more radiological equipment for detecting nuclear fallout. The OCDM will be moved from its former Battle Creek, Mich. headquarters to Washington, rechristened the Office of Emergency Planning, and will work on such programs as materials stock-piling and industrial mobilization. Frank B. Ellis, former chief, will head the new office, attached directly to the White House.

$25 million tingle

Manhattan's Summit Hotel opened its plate-glass doors last month to become the first new hostelry in the big city since the Waldorf-Astoria went into the business of welcoming transients in 1931. Summit's architect was Morris Lapidus of Miami and New York, best known for 1954's Fontainebleau and the following year's Eden Roc Hotels in Miami Beach. His new design is expected by the owners (Loew's Hotels, Inc.) to create "the tingle of anticipation a visitor should feel at checking in." The $25 million "tingle" sits zigzag on a 100 by 320 foot corner of Lexington Avenue and 51st Street. Its curvaceous façade is sheathed in marble, glass, glazed brick, and aquamarine ceramic tile. The 800 rooms will range in price from $14 a day for a single to $185 for a six-room presidential suite. The suite is opportunely furnished with a $280 Danish modern rocking chair, but the first occupant was slated to be Groucho Marx, who has never run for anything except blondes.



Transients are expected to vibrate when they enter under a ceiling of gleaming Byzantine gold mosaic into a lobby lined in East Indian Rosewood inset with gold anodized strips. Lighting fixtures, according to the management, are "golden flora" and the white terrazzo floor is inset with blue and green Venetian panels. The registration desk is covered in Smalti mosaic tile. A Carioca Lounge and Gaucho Room carry out one of the architect's themes—the Americas. The Summit's Mayan coffee shop is called La Casa del Café and the appetizing colors of the room range from pale pink to deepest purple with strong accents of mauve and orange. Walls are pre-Columbian in design.

But the Summit is only the beginning. Loew's Hotels plans to open four more new hotels or motels in Manhattan within the next two years. Their architect: Morris Lapidus. By 1963, guests will be tingling in anticipation while registering also at the 2,000-room Americana at Seventh Avenue and 52nd Street; the Regency at Park Avenue and 61st Street; the Loew's Motor Inn on Eighth Avenue at 51st Street, or Loew's Midtown Motor Hotel on Eighth Avenue and 48th Street.

Bolt, Beranek & Newman sells stock to public

The great postwar building boom has brought with it a boom in building science, particularly in such once-unexplored areas as acoustics. And booming right along with the proliferating interest in acoustics and noise control have been Consultants Bolt, Beranek & Newman of Cambridge, Mass., who dominate their field as perhaps no other firm in a single area of construction.

The success of BBN was underscored recently with the sale of its stock to the public for the first time. The $1,920,000 stock issue (about $1.1 million of which was sold by the corporation, the rest by a group of principal stockholder-officers) will beef up the corporation's working capital and also help finance an ambitious program of product development in acoustics and other fields. (The public's appraisal of BBN's future was apparent from the price performance of the new issue—sold initially at $12 per share, the stock immediately jumped to $15.25 per share on a bid basis over-the-counter, and seven weeks later had leveled off at around $15.50 per share.)



FRANK LLOYD WRIGHT'S GREEK ORTHODOX CHURCH

Workmen applied finishing touches last month to Frank Lloyd Wright's $1,250,000 Greek Orthodox Church at Wauwatosa, Wisc. One of his last major works, it will be finished around Labor Day.

Until World War II, acoustics had been something of a back-room problem, usually turned over, by the few architects who ever really cared about it, to a small handful of academic scientists. Chief among these were Dr. Richard H. Bolt and Dr. Leo L. Beranek, who formed MIT's Acoustics Laboratory after World War II. Bolt, who now is on leave from BBN while serving as associate director for research of the National Science Foundation, set the pattern for what is BBN today. After getting an M.A. in architecture at the University of California in 1937, he continued at the university until he had a Ph.D. in physics. The coordination of these two disciplines seemed natural in the assault upon acoustical problems.

In 1948, Bolt and Beranek formed a partnership and with Robert B. Newman, Samuel Labate, and Jordan Baruch took on the job that more than any other shaped the destiny of BBN: the acoustical problems of the huge United Nations headquarters in Manhattan. Among the answers were the now famous golden-colored wooden vertical rails slanted so as to lessen reverberations and overlapping echoes, and the ceiling treatment, where ductwork and vents were left uncovered, thus breaking up reverberations, and also forming a curious ceiling-mural.

With the huge UN job as a starter, BBN moved quickly into a prominent position in the field of architectural acoustics. Today, about 25 per cent of

continued on page 8



JIM BURKE



WITH PROGRESS AFORETHOUGHT: NEW YORK'S PENN STATION, PRESENT AND FUTURE

McKim, Mead & White's Pennsylvania Station (above, left) was completed in 1910 and has haunted New York's West Side ever since with visions of the Baths of Caracalla. But with progress aforethought, the Pennsylvania Railroad and the Graham-Paige Corp. plan to build in its place Architect Charles Luckman's $75 million design (above, right) for a brash, new Madison Square Garden and Entertainment Center, to be completed in 1964. An arena seating 25,000, an auxiliary arena for 4,000, a rooftop ice "palace," a 34-story commercial office building, and a 28-story hotel would replace the old station superstructure. Train service would not be interrupted during construction, and the interior of Charles F. McKim's classic Roman waiting room would remain intact.

their efforts are in this area, although much of their other work has indirect application to building. For instance, work on noise and vibration problems associated with space vehicles has led to knowledge of the response of structures to sound, which is applicable to acoustical problems in buildings. This has led to work on airport facilities of all sorts, including contracts for noise control for the Port of New York Authority's airport complex. In the areas of applied physics, instrumentation, man-machine systems and biomedical technology, which have become important activities for BBN, government contracts support consulting and research work. Last year, government contracts accounted for 60 per cent of BBN's work, and BBN currently has a $700,000 backlogue of such work.

Today, BBN generates income of over $2 million a year, compared to about $680,000 only five years ago. A growing share of its income is coming from patent royalties on the six major products it has patented since it was incorporated in 1953. Three of these have direct building application: Soundsheet, a thin, plastic-laminated, translucent, sound-absorbing sheet that combines the functions of acoustic tile and a diffusing panel lighting system. Soundshear, an acoustically refined building method for sandwich panels; and Aircoustat, an air-conditioning quieting device. BBN hopes to greatly expand its patented products with proceeds from its stock offering.

The biggest building job BBN is currently handling is the general consulting work for the Lincoln Center for the Performing Arts, as well as specific assignments for the Concert Hall, the new Metropolitan Opera, and the Repertory Theater. But even in the midst of such huge undertakings and its research into such exotic areas as psychoacoustics (including measurement of brain waves and responses to noise in various stages of man's wakefulness and sleep) and servosystems, BBN ponders more down-to-earth problems, such as letting architects of smaller buildings know that they are as interested in the acoustical problems of their designs as in the massive projects upon which they have formed their reputation.

Former housing director hits bleak public housing

"Drinking beer in company is recreation," says former Chicago Housing Director Elizabeth Wood. "Eventually public housing ethics and mores may recognize this fact, and we may be able to develop a native counterpart of the English pub."

Among the other innovations for public housing which she advocates is the concierge. Unlike the beady-eyed crone shuffling about in slippers that some Americans may envision, Miss Wood would have this custodian "take a lively interest in the tenants and their activities. The job of this 'concierge' would of necessity include certain custodial or maintenance functions, but its distinguishing feature would be the availability and responsibility for keeping an eye on the lobby."

All these and other provocative opinions are contained in "Housing Design: A Social Theory," a study she made for the Citizens' Housing and Planning Council of New York. A former professor of English at Vassar and noted as an articulate and fiery pioneer in the field of urban problems, Miss Wood has taken a long look at "bleak, unloved" housing projects. Her 32-page booklet, financed by the Phelps-Stokes Fund, nevertheless states that she has "loved public housing for a long time," and she has written elsewhere that U. S. cities need much more public housing than now available.

The solution Miss Wood suggests is centered on the humanizing of high-rise public housing projects. She would like to see some of the old-fashioned amenities of neighborhood city blocks transferred to developments she compares with "army barracks and institutions." Her study calls on housing administrators and architects to create informal "loitering" places for adults and children, such as candy stores, bocci courts, drug stores, and neighborhood pubs.

Not everyone agreed with Miss Wood's vision of paradise. "Many salvageable 'slums' are already well equipped with saloons, candy stores, loitering places, and a humming community life," said an editorial in LIFE. "Why should a publicly subsidized and supervised candy store be an improvement on the private one around the block?" But the most down-to-earth comment of all came from a lady in Brooklyn who lives in a housing project herself. "I can just imagine," she told

the New York *Post*. "My kid says he's going to the teen-age candy store for a cherry soda and he comes back with gin and stout on his breath, or whatever it is they drink in English pubs."

Meanwhile, the English idyl of pubs and contentment that Miss Woods extolls crumbled somewhat with a report issued last month by the Ministry of Housing for England and Wales. Surveying the new towns program after ten years in operation, the Ministry discovered a wave of homesickness for the friendliness of city life. Social workers call it "new town blues" and find that open spaces are not always a substitute for the old neighbors and relatives or the shop, pub, cinema, or dance hall just around the corner. They report spreading boredom in the 12 British new towns built since World War II. "Too much is being handed to them on a plate," said one official.

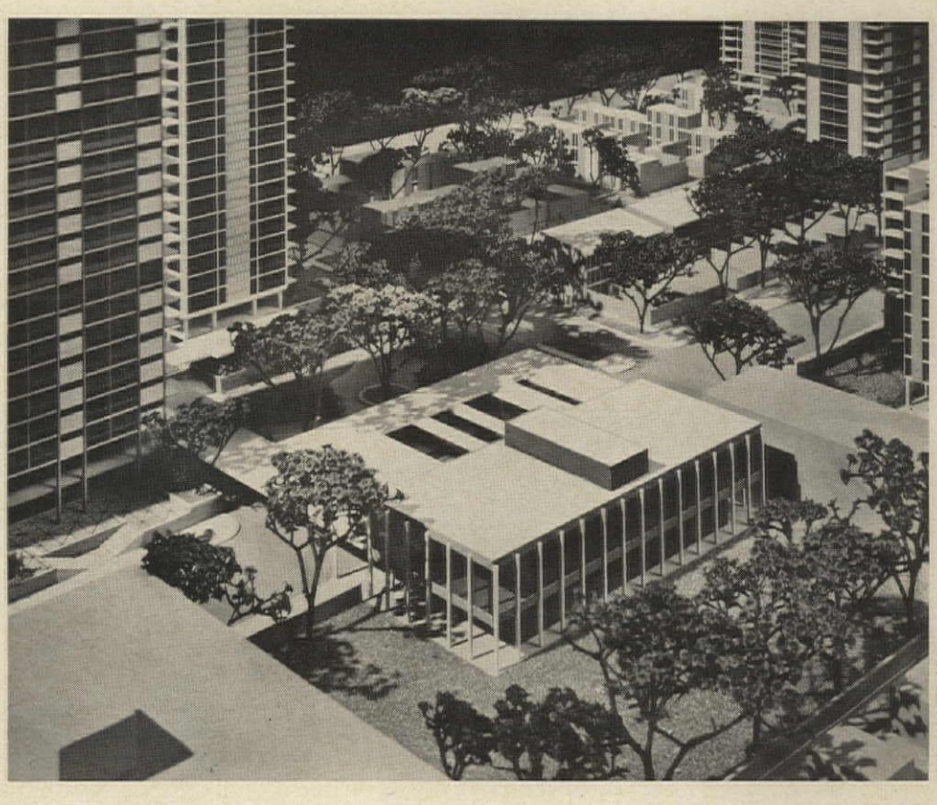
British housing authorities are beginning to re-evaluate population densities for new urban centers and may try to simulate "the intimacy of living at close quarters" that new residents miss. The Ministry of Housing's report stated pessimistically: "It is doubtful whether the neighborliness and intimacy typical of urban life at its best can ever be reproduced within a framework of a housing layout based on the generous densities and living conditions inherent in the garden city idea."

Rivals protest Rubloff's Chicago renewal proposal

Chicago's much-coveted North-LaSalle renewal project was awarded to Broker Arthur Rubloff last month over heated protests by his competitors. At $6,411,000, or $9.17 per square foot, Rubloff's bid exceeded by $2 million the next of six competing offers for the 16.1-acre real estate plum, one of the biggest renewal projects ever undertaken in Chicago. (It is bounded by North Avenue, LaSalle Street, Division Street, and an alley between Clark and Dearborn Streets—see model photo.) Rubloff also offered the lowest monthly rentals of any of the six: they will cost from $115 to $125 for efficiency apartments, $130 to $170 for one-bedroom units, $167 to $240 for two bedrooms, and $216 to $275 for three bedrooms.

In combining a $9 land offer with the lowest rentals, Rubloff created speculation in Chicago as to whether he would be compelled to modify his quality, drop special community facilities, or raise rents above the middle-income level—any of which would require contractual modifications.

The Land Clearance Commission's choice of the Rubloff proposal was most hotly contested by Metropolitan Structures, whose competing project, bearing the next highest land offer of $4,325,000, was designed by Skidmore, Owings & Merrill. In a last-ditch stand, Metropolitan Structures President Bernard Weissbourd wrote letters to the Land Clearance Commissioners warning against their accepting Rubloff's high bid. "Should the option features be eliminated—or any changes be made in the Rubloff offer," said Weissbourd, "the original bond no longer guarantees that Mr. Rubloff will sign any redevelopment agreement. Under these circumstances his offer would, in effect, be made without the 10 per cent good faith deposit." Earlier, Metropolitan representatives had protested against conditions allowing Rubloff to buy North-LaSalle land in three parcels with no time limit for building the apartments and town houses. His competitors had all offered to buy the site in one package. Phil A. Doyle, LCC executive director, cut off all discussion, however: "The commission does not propose to engage in any arguments with bidders on the merits of one offer over another. . . . We feel we can rely on them [the Rubloff group]".



BUSINESS ARTS, INC.

Model of Rubloff scheme

Rubloff is chairman of Arthur Rubloff & Co., one of the nation's largest realty firms, and is noted for mammoth developments such as the $200 million "Magnificent Mile" shopping district on North Michigan Avenue and the $400-million Fort Dearborn and $25-million Old North Town Redevelopment projects, also in Chicago. His co-sponsors in the North-LaSalle project, which he plans to name the "Carl Sandburg Center," are Investment Banker George H. Dovenmuehle; Louis R. Solomon, president of L.R. Solomon–J.D. Cordwell & Associates, architects for the development (Cordwell was formerly architect for the Chicago Planning Commission); Lloyds Construction, Inc., and Robin Construction Co., contractors.

The syndicate proposes to build a giant new residential center in the area being cleared of aging buildings by the Chicago Land Clearance Commission in a $10-million effort to stave off the citizenry's flight to the suburbs. Seventy-three per cent of the land (about 12 acres) will be left in open space, according to the Rubloff proposal, and the rest will be covered by four 27-story, three 24-story, and two 10-story apartment buildings. Ninety-four town houses will complete the total of 1,932 living units. Project Manager Stanley Goodfriend expects to start construction on two of the tallest apartments in

continued on page 11



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(New 4-prong base shown is CHF No. 953)

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February and the other two in March '62. Among the features in the prospectus for the new project: a performing arts center with theater, an adult recreation center, artists' studios, and a kindergarten through second-grade school to be built and leased to the Board of Education. The plan as bid also reserves land for a new six-grade elementary school.

1961 Industrial Building Congress meets in NYC

Mexican Architect and Engineer Felix Candela (see page 108) will be one of the speakers at this month's Industrial Building Congress which opens at Manhattan's Coliseum on September 25th. Building products and machinery will be exhibited concurrently throughout the three days' sessions. Other speakers on a variety of industrial construction subjects will be: Canadian Architect John C. Parkin; Armand H. Gustaferro, supervisor of construction engineering for the Portland Cement Assn.; Charles R. Colbert, dean of Columbia University School of Architecture; T. R. Higgins, director of engineering and research for the American Institute of Steel Construction; and Robert W. McLaughlin, director of Princeton's School of Architecture.

PHOTO CRAFTSMEN, INC.



NORFOLK'S URBAN RENEWAL HOTEL

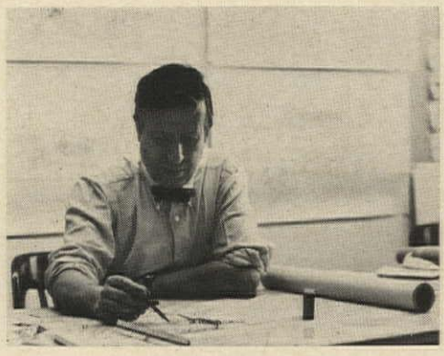
The $7-million Golden Triangle is Norfolk's first new downtown hotel in 50 years. It is also the first completed commercial building in Norfolk's $1 billion urban renewal program. Jointly sponsored by New York's Futterman Corp. and Washington Developer Herbert Glassman, the 14-story motor hotel, convention center, and office building complex is located on 5½ acres formerly slum-ridden. With 100 conventions already booked, it is expected to put Norfolk on the map as a convention city. The architect was Anthony Musolino. Morris Lapidus was consultant.

People

Von Moltke will plan new city in Venezuela

The Joint Center for Urban Studies of MIT and Harvard has appointed Architect and City Planner **Willo von Moltke** to be director of Urban Design for the new city of Santo Tomas de Guayana in southeast Venezuela. **Norman Williams Jr.**, former chief of New York City's planning office, will be director of the $900,000 project. Venezuelan President Romulo Bétancourt established Santo Tomas a year ago and engaged the Joint Center to guide the three-year project. It will be the third postwar total city scheme after Chandigarh and Brasília,

GEORGE FOHL



Von Moltke

and is expected to have a population of 250,000. The locale of the new city, the Guayana Region, is in the process of mammoth industrialization and von Moltke and Williams will also prepare an economic development program for the entire Orinoco Valley.

Von Moltke is resigning as chief designer for the Philadelphia City Planning Commission and will organize an office in Caracas in early September. The office will be staffed by about 15 draftsmen, secretaries, economists, sociologists, and planners. Unlike Brasília in its earliest stages, Santo Tomas de Guayana has existing transportation links to the rest of the country. A 40-foot channel with good harbor possibilities runs directly to the city site, which is also connected with the national road system. There are several air strips already available. Von Moltke describes the site which is at the confluence of the Orinoco and Caroni Rivers as having "rolling hills within sight of distant mountains. A magnificent waterfall which will be visible from all parts of the city gives the site a very special character."

A graduate of the Berlin Institute of Technology, von Moltke worked in England and Sweden before coming to the U.S. in 1940. His first job here was with Alvar Aalto, designing a medical center in Caracas which was never built. After receiving an M.A. at the Harvard Graduate School of Design, he worked under Marcel Breuer, Hugh Stubbins, Eero Saarinen, and Louis Kahn before joining the Philadelphia Planning Commission staff in 1953. Von Moltke has also taught architecture at the University of Michigan, the University of Pennsylvania, and Harvard. He was a consultant on the design of the 10th Street Mall in SW Washington, D.C., and on campus plans for the University of Michigan and Lincoln University in Pennsylvania.

New planning chiefs in St. Louis, San Francisco

Robert B. Jones, 33, has been appointed St. Louis city planning director. He succeeds **John M. Poland**, who resigned last May because of ill health. Jones was previously resident planner in Birmingham, Ala. for Harland Bartholomew & Associates and was chosen from 17 candidates for the $13,400-a-year St. Louis post. A native of Pennsylvania, Jones was graduated from Iowa State University in 1946 with a degree in landscape architecture and his former jobs include director of planning in Davenport, Iowa and resident planner in Memphis, Tenn. for five years.

Architect **George T. Rockrise**, 44, is the new San Francisco City Planning Chief. His predecessor was **Mark R. Sullivan**, 65, who resigned in June after three months in office to devote more time to business interests. Rockrise, president of the Northern California Chapter of the AIA, is a partner in the San Francisco firm of Rockrise & Watson and has taught architecture at the University of California, Syracuse, Clemson, the University of Utah, and the National University of Venezuela.

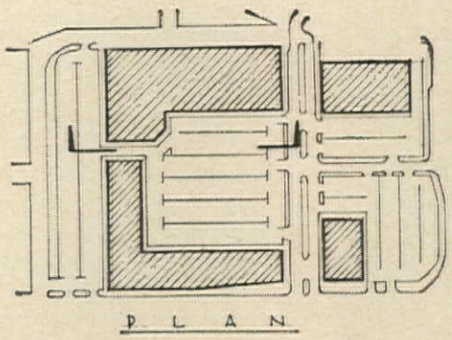
Competition winners

A three-man architectural team from Beverly Hills, Calif. won the $10,000 grand prize in the third annual design competition of the Mastic Tile division of the Ruberoid Co. Architects **Victor A. Cusak** and **Ronald Meza**, of the office of Charles J. Luckman Associates, and **James S. Moore**, of the office of Medical Planning Associates placed first in the $25,000 competition with their design for "Long-range Planning for the Medical Care Facilities in the Community." For the first time in the history of the competition, a major

continued on page 16

DIVIDEND ENGINEERING*

FORECASTS A $30,500 SAVING ON EQUIPMENT AND $2,250 IN YEARLY OPERATING COSTS AT NEW SHOPPING CENTER, NEW ORLEANS, LA.



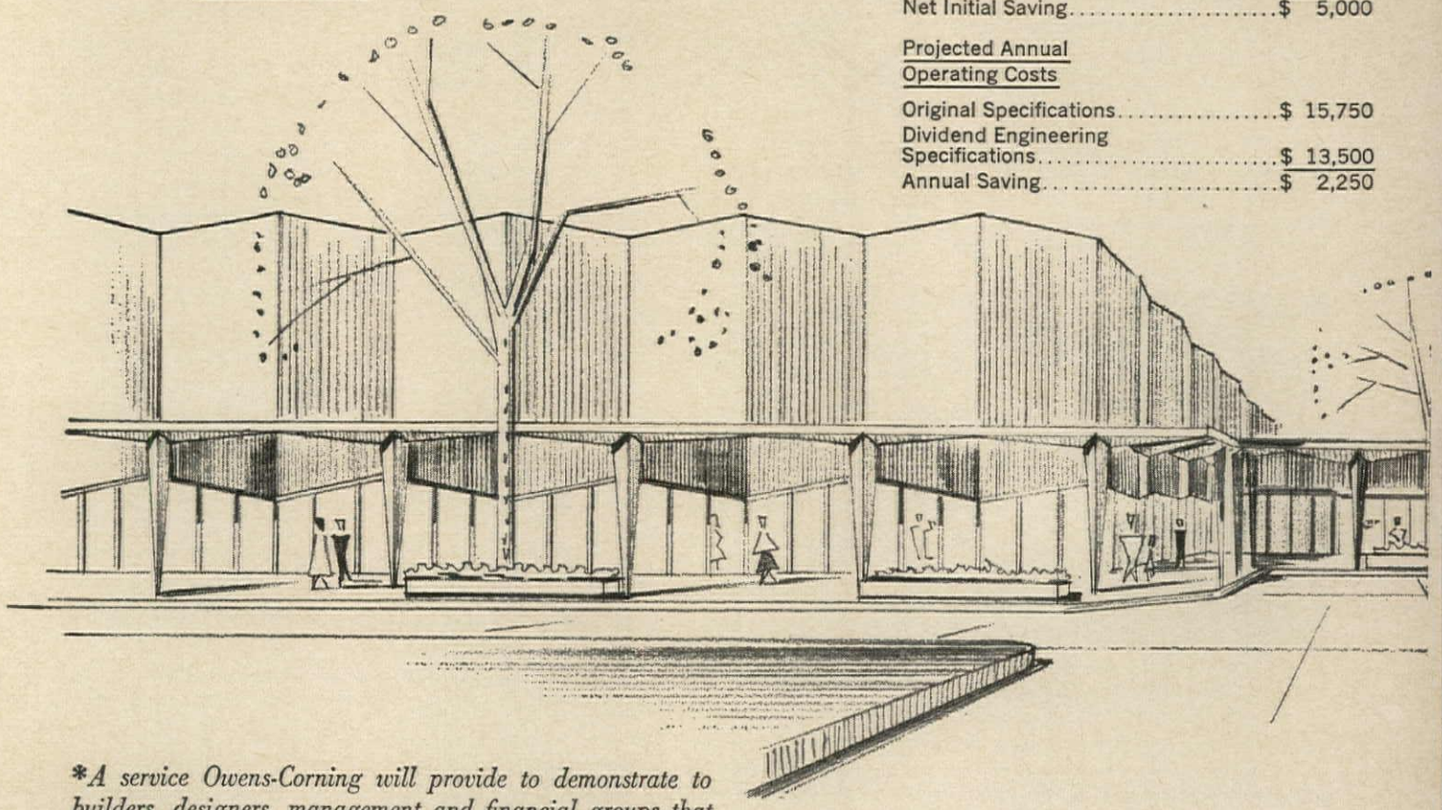
DIVIDEND ENGINEERING
DOLLAR-SAVING PROPOSAL

Cost of Heating & Cooling Equipment

Original Specifications	$277,000
Dividend Engineering Specifications	$246,500
Predicted Saving	$ 30,500
Additional Insulation Cost (in place)	$ 25,500
Net Initial Saving	$ 5,000

Projected Annual Operating Costs

Original Specifications	$ 15,750
Dividend Engineering Specifications	$ 13,500
Annual Saving	$ 2,250



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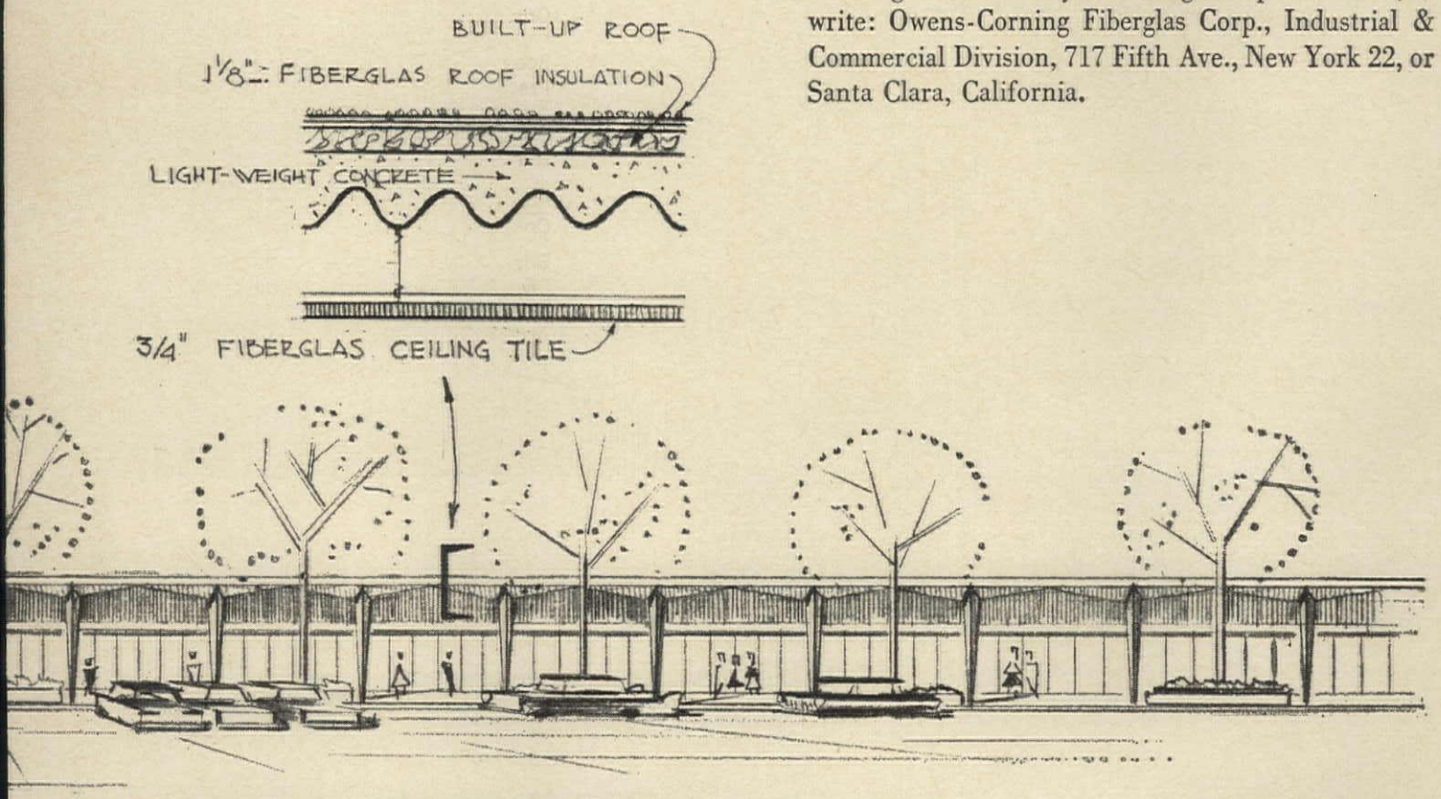
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General Contractor: Gervais Favrot Co., New Orleans.
Fiberglas products used in this installation: Perma Ply Built-up Roofing; Roof Insulation; Ceiling Board; Duct Insulation.

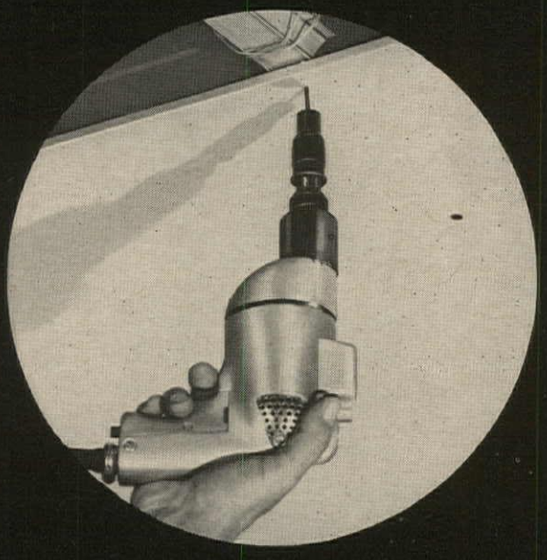
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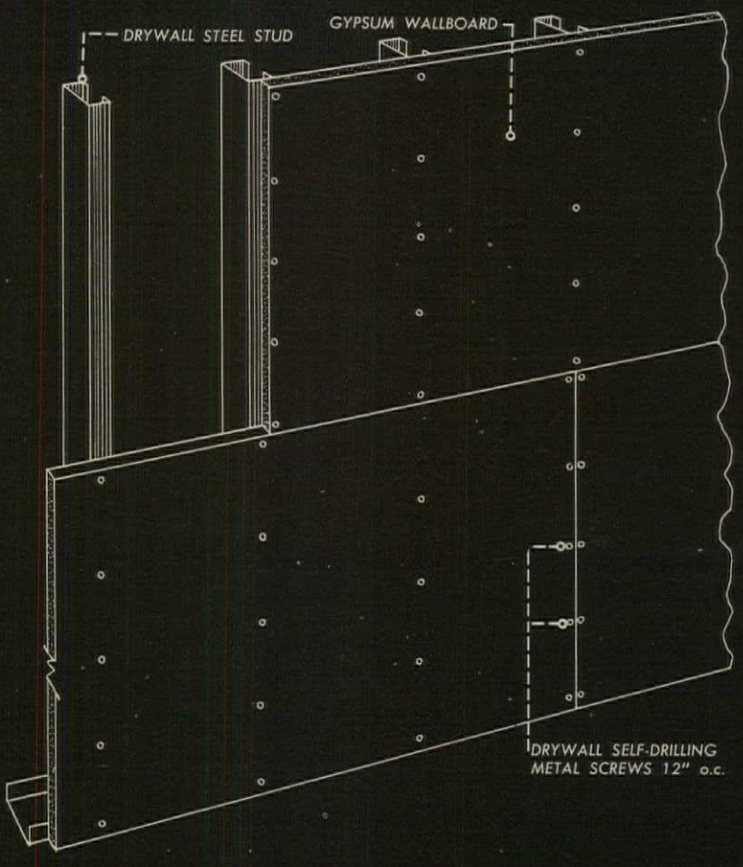
†T-M. (Reg. U.S. Pat. Off.) O-C.F. Corp.

2 new gypsum wallboard

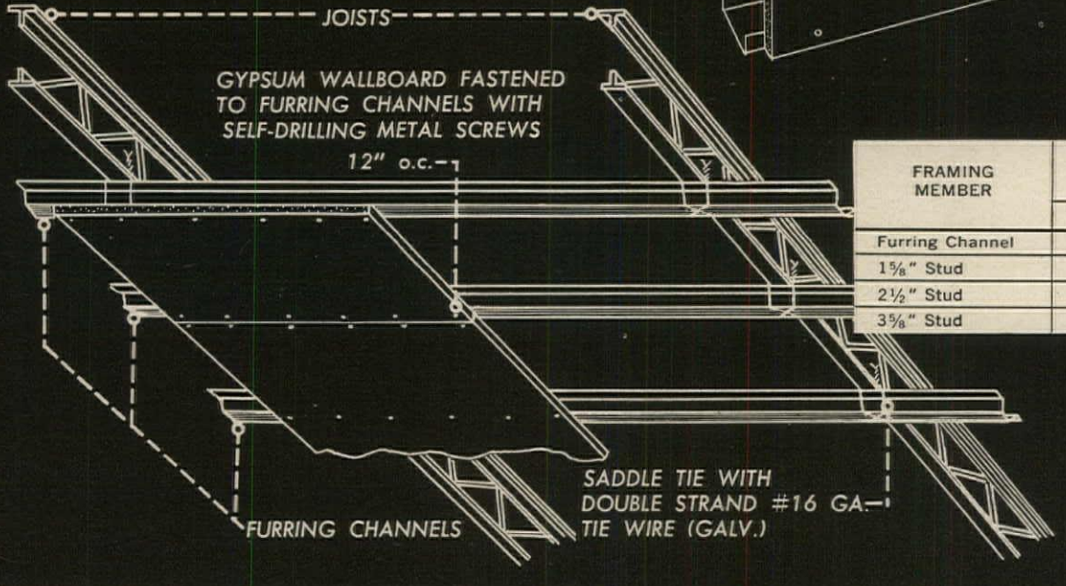
one for screw application



HORIZONTAL APPLICATION OF GYPSUM WALLBOARD



CEILING SYSTEM WITH STEEL STUDS AND SCREWS



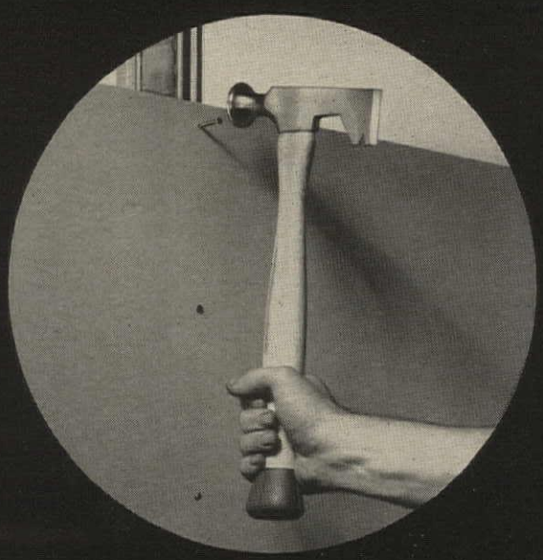
FRAMING MEMBER	SPACING AND WALLBOARD THICKNESS		CENTER TO CENTER SPACING OF MAIN SUPPORT
	½"	⅝"	
Furring Channel	24"	24"	4 ft.
1⅝" Stud	24"	24"	5 ft.
2½" Stud	24"	24"	6 ft.
3⅝" Stud	24"	24"	8 ft.

Developments are coming so fast these days, it's hard to keep up. We'll try to keep you informed. Save these pages and those that will appear in following issues. You'll soon have an up-to-date file on the most advanced methods of erecting gypsum wallboard systems for fast, economical wall and ceiling construction.

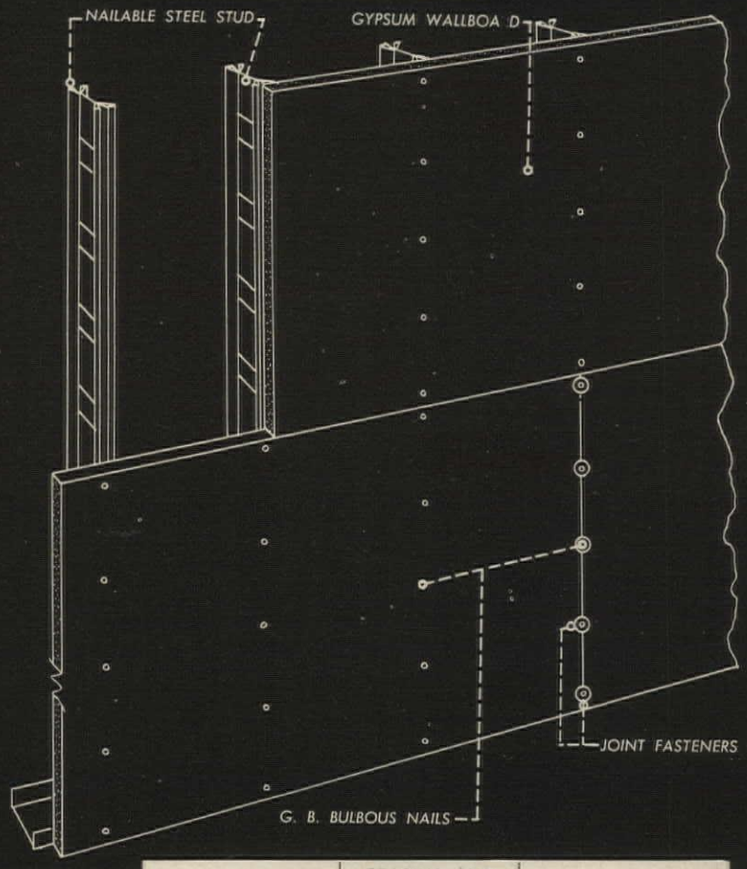
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STEEL-STUD SYSTEMS

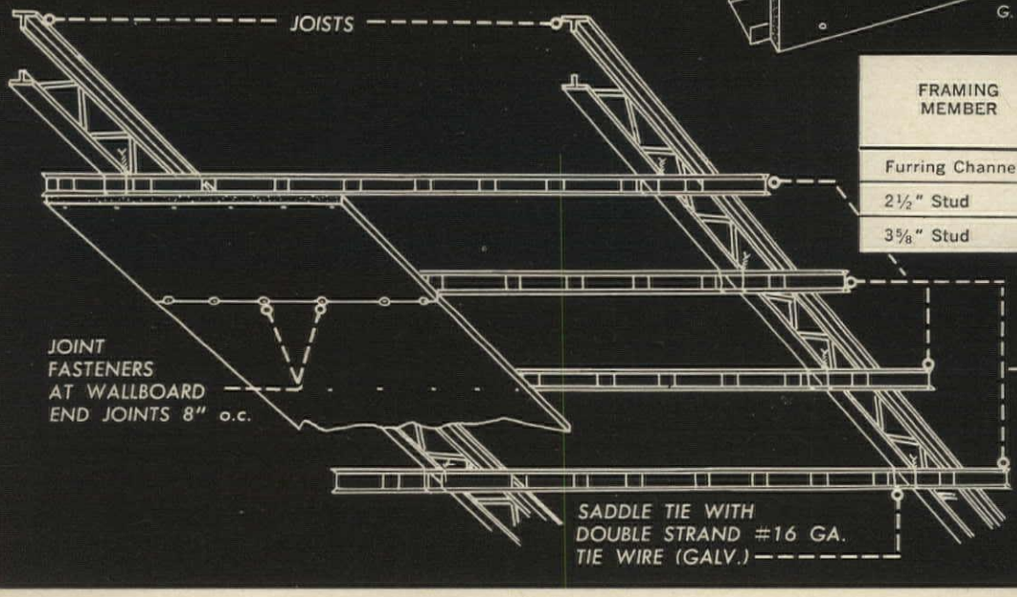
one for nail application



HORIZONTAL APPLICATION OF GYPSUM WALLBOARD



CEILING SYSTEM WITH NAILABLE STEEL STUDS



FRAMING MEMBER	SPACING AND WALLBOARD THICKNESS		CENTER TO CENTER SPACING OF MAIN SUPPORT
	½"	⅝"	
Furring Channel	24"	24"	4 ft.
2½" Stud	24"	24"	6 ft.
3⅝" Stud	24"	24"	8 ft.

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award was made to a student team. The $5,000 second prize was won by students **Jimmie W. Bruza, James F. Knight, James S. Daley,** and **William C. Watson Jr.** of Oklahoma State University. Third prize of $2,500 went to **John V. Sheoris,** of the office of Harley, Ellington, Cowin & Stirton, Inc. in Detroit, and **William J. Johnson** and **Clarence Roy,** who are partners in the firm of Johnson/Roy in Ann Arbor, Mich. The top two awards of $2,000 and $1,000 in the special student category went to two more Oklahoma State University teams. In first place were **Alan Bentley Glass, Forrest L. Johns,** and **David M. Griffin,** while teammates **Miller Edward Gerardy** and **Richard W. Cramer** were second. The third student prize of $500 went to **Don Dommer** and **Gordon Kovell** of North Dakota State University.

Hurst takes USC post

Samuel T. Hurst, 40, has resigned his post as dean of the School of Architecture and the Arts at Auburn University, Alabama to accept an appointment as dean of the School of Architecture at the University of Southern California. Hurst is a member of the National Architectural Accrediting Board and has also taught at Georgia Tech and Tulane.

Washington's Redevelopment Land Agency named five architects recently to advise the agency on the design of future projects in southwest Washington. Panel members are: **Louis Justement; Carl Koch; Jacob L. Crane; G. Holmes Perkins;** and **Hideo Sasaki.** END

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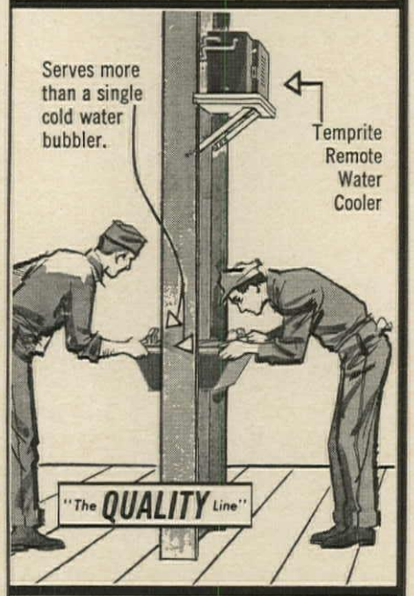
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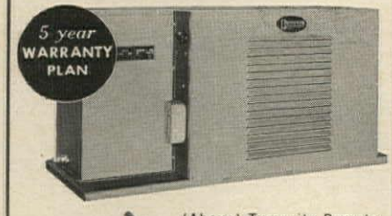
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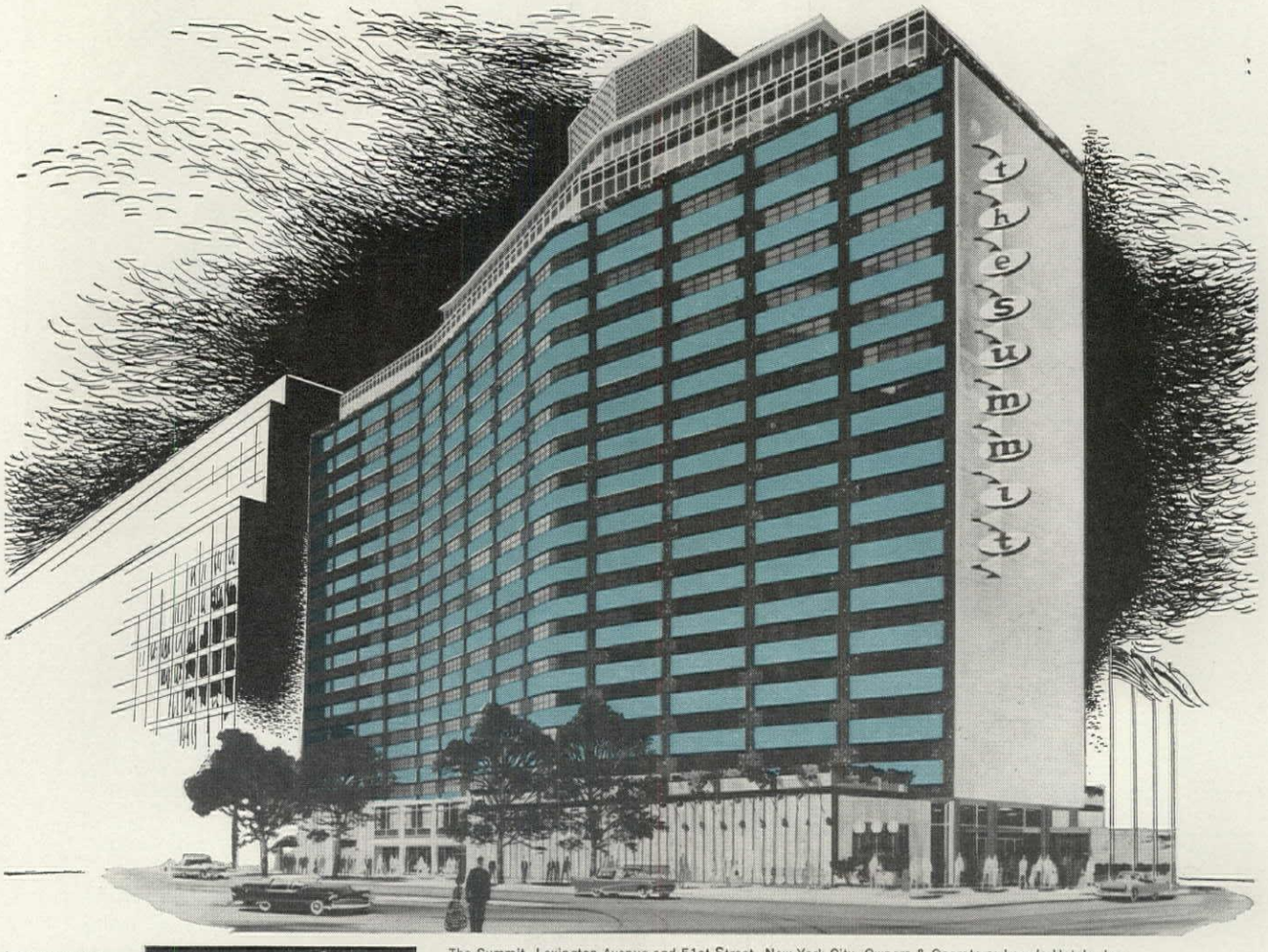
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A roundup of recent and significant proposals

NEW NEIGHBOR FOR THE U.N.

Ground-breaking ceremonies in Manhattan last month marked the start of a $40-million complex of apartments and offices one block north of the United Nations, part of which appears at left in the rendering. Webb & Knapp, Inc. and Alcoa are partners in the venture; Harrison & Abramovitz are the architects. A majority of the tenants in the six office stories at the base will be U.N. delegations and their staffs. Above them will be a terrace floor, then 31 stories of apartments in each tower. Although construction materials have not been announced, one safe prediction would be aluminum. The developers plan to give 12,000 square feet of the full-block site to the city for a park and a playground.



NEW BANK TOWER FOR DETROIT

A parking lot will give way to this 26-story tower which Developers Sam Minskoff & Sons claim is "the first major rental office building to rise in Detroit in more than 30 years." The former owner of the parking lot, the Detroit Bank & Trust Co., will be the chief tenant and give its name to the new building. The bank will also remodel its main trust office in the four-story structure next door and link the two so that the lobby and main banking floor will extend through both buildings. Architects: Harley, Ellington, Cowin & Stirton, Inc.; Emery Roth & Sons, consultants.





NEW HOTEL IN PAKISTAN

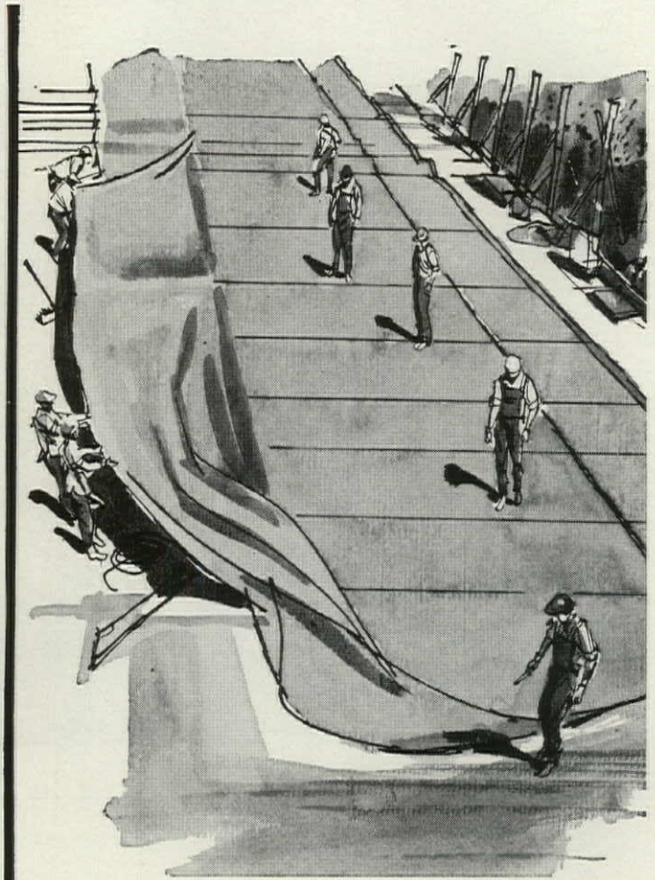
Adding another to its string of widely scattered hostelries, the Intercontinental Hotels Corp. will build this hotel in Karachi, in association with Pakistan International Airlines. A precast concrete screen wraps the nine guest floors from top to bottom, shading balconies, reducing air-conditioning loads, and protecting windows from sandstorms. In the story-and-a-half section flanking the tower are the hotel's public rooms: a swimming pool and perimeter colonnade, a coffee shop, restaurants, and a higher-roofed ballroom (left). Architect: William B. Tabler of New York City.

continued on page 55

What's News in Rubber...



LIGHTWEIGHT, DURABLE, permanently flexible and applied cold – that's the colorful new Butyl roofing system at Longway Planetarium, Flint, Mich., designed by Smith, Hinchman & Grylls Associates, Inc. (Detroit).



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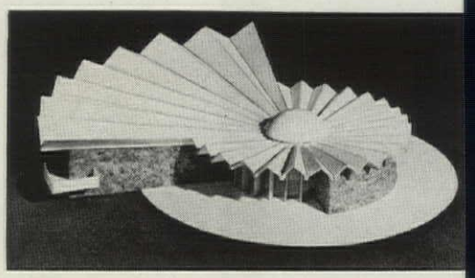
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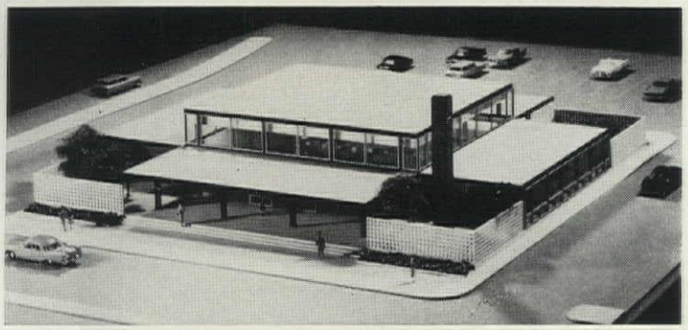
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PHYSICS LABORATORY AND LECTURE HALL AT RUTGERS

These two seemingly disparate parts—a laboratory (above) and a pleat-roofed lecture hall (model photo, right)—fit closely together in Rutgers' master plan for its new physics department buildings in Piscataway Township, N.J. The lecture hall roof also appears to the right of the laboratory in the rendering above. In its first stage, the lecture hall will fan out in a quadrant shape from a circular lobby; at a later date, another identical quadrant will be built on the opposite side. Some 330 window-wall units of precast concrete frame the laboratory's upper floors, and the rooftop mechanical equipment is hidden behind reinforced plastic panels. Both structures were designed by McDowell-Goldstein Associated Architects, of Montclair and East Orange, N.J. They are being built with $1.4 million from a bond issue and $400,000 from the National Science Foundation.





EXPANDABLE BANK ON LONG ISLAND

Looking hopefully toward a prosperous future, Brooklyn's Williamsburgh Savings Bank plans several expandable features which are to be built into its Levittown, N.Y. branch. Among them are four corners to be filled in with more teller stations and added mezzanine floors over the porch areas, which are built to support the increased weight. Customer conveniences, aimed at bringing in more business, center on a supervised playground where children are "checked" during business transactions, customer services all on one floor, and a wide range of "big bank" services. Architects: Frederic P. Wiedersum Associates, of Valley Stream, N.Y.



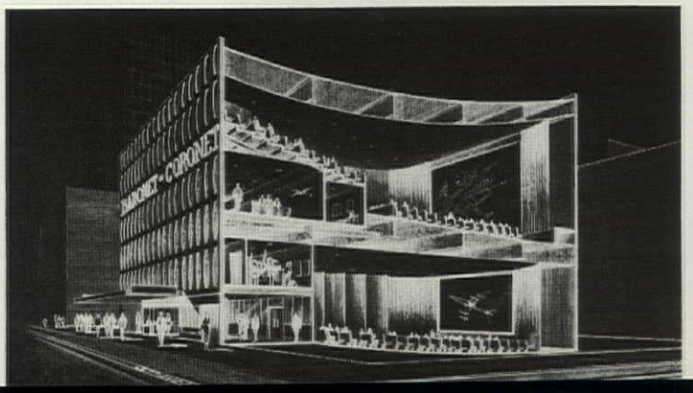
CURVY HEADQUARTERS FOR COLORADO SCHOOLS

Caudill, Rowlett & Scott have thrown a couple of curves at the Colorado Education Assn. in Denver: a curvilinear free form for a four-story office building (left) and another for the lower conference center adjacent to it. The strip windows in both face the Rockies view, while the rear and end walls, which project beyond the face of the building, are windowless and built of native stone over concrete frames. Facing materials will be glass set in aluminum, stucco, and precast concrete panels at the fascia. Construction is scheduled to begin next month, and the target date for completion is January 1963. Estimated total cost: $1 million.

PIGGYBACK THEATERS IN MANHATTAN

The cutaway rendering at right shows how Architect John J. McNamara plans to refurbish one Third Avenue movie theater and construct an entirely new one above it. Scarce and expensive land prompted the double-decker design, an idea reinforced by hopes of operating economies. A boldly patterned terra-cotta screen will front the common façade, and an air curtain will replace conventional doors into the lobby. The owner-developer is Walter Reade, Inc.

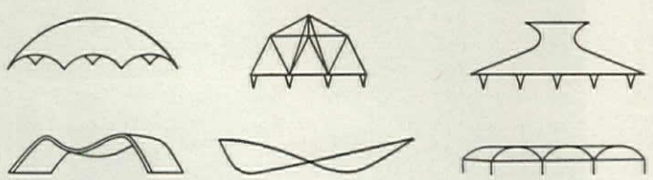
continued on page 57





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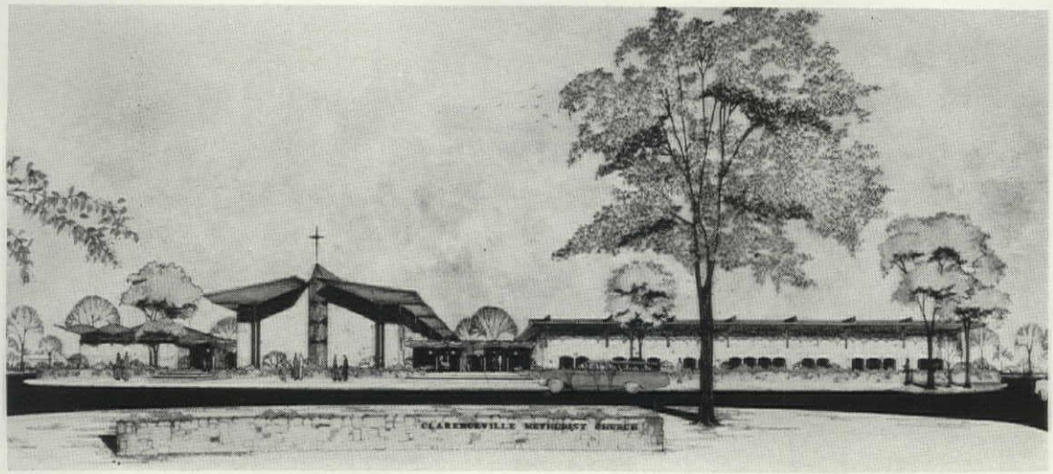
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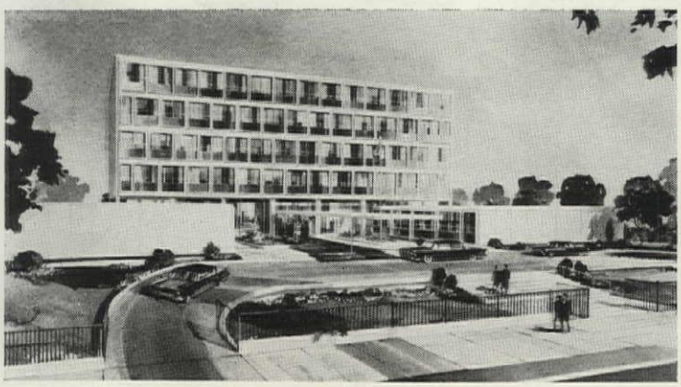
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CITY_____ ZONE____ STATE_____

I am an ☐ *Architect* ☐ *Roofer* ☐ *Contractor*
☐ *Builder, Other*_____



CHURCH IN MICHIGAN

Starting out with a small congregation not many years ago, the Clarenceville Methodist Church of Livonia, Mich. has outgrown its old frame building and is now building the new chapel, church, and fellowship hall-school shown at left, designed by Begrow & Brown. A podium common to all three buildings lifts them 3 feet above ground. Between the concrete vaults of the church proper, a long, narrow skylight runs the building's length, ending in a stained-glass window behind the altar.

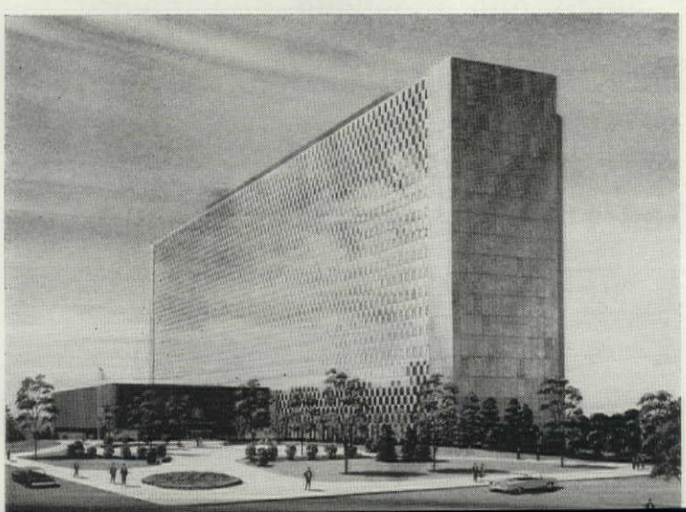


U.S. EMBASSY IN WARSAW

On a neutral wedge of land between the diplomatic enclaves of Bulgaria and Switzerland, the U.S. is building this new embassy in Poland, designed by Welton Becket & Associates. The five-story office building is under construction now, and separate staff apartments, already designed, may be built later. The glass-walled block of offices sits squarely over a U-shaped base enclosing an entrance courtyard.

FEDERAL OFFICES IN KANSAS CITY

Recently the General Services Administration approved this two-part scheme for Kansas City's new $39 million federal office building (below). Huddled at the base of a tall office slab sheathed in a checkerboard of metal and glass, a three-story structure will contain public services, a main lobby, and a post office. Architects: Voskamp & Slezak; Everitt & Keleti; Radotinsky, Meyn, Deardorff; and Howard, Needles, Tammen & Bergendoff, all of Kansas City.





LUXURY APARTMENTS IN LOS ANGELES

Topped out a month ahead of schedule, the Wilshire-Comstock apartments in West Los Angeles (above) will be finished in the spring of 1962, keeping intact Tishman Realty & Construction Company's record of a building a year in the Los Angeles area. Each apartment, whether of one-, two-, or three-bedroom size, will have a terrace separated from the living room by sliding aluminum doors. Behind the balconies, which are faced with white ceramic tile, the exterior will be a stuccoed block curtain wall. A central heating and air-conditioning system will be zoned for different exposures and controlled by tenants from their own apartments. Victor Gruen Associates are the architects; Edgardo Contini, partner-in-charge. Tower height: 20 stories. END

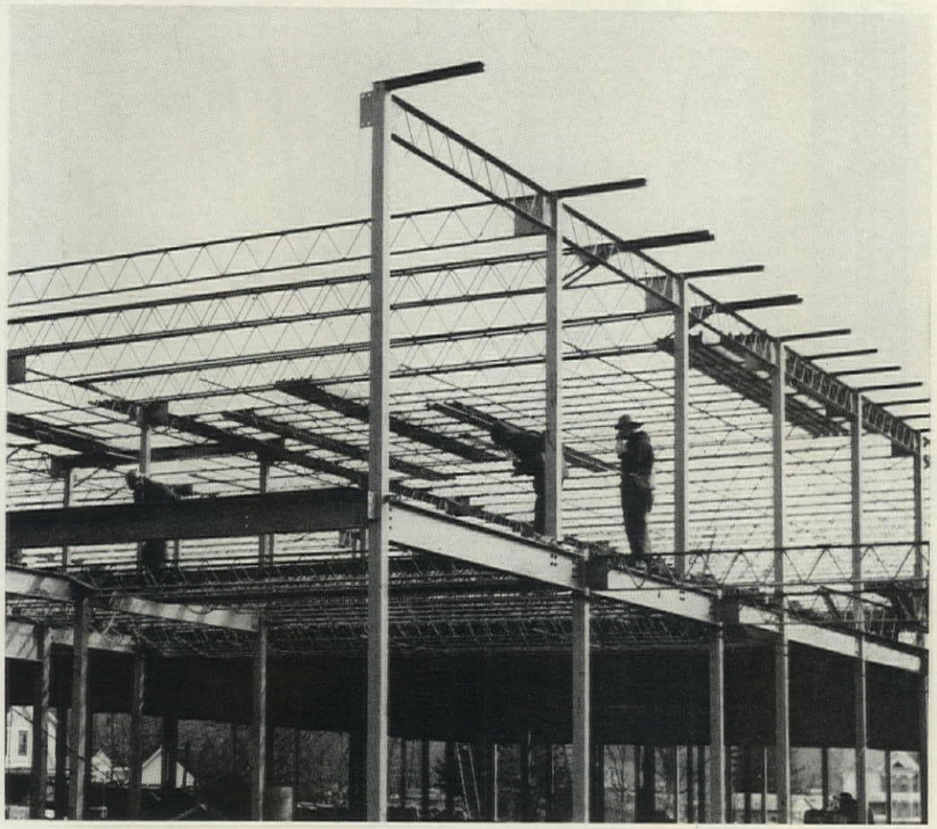


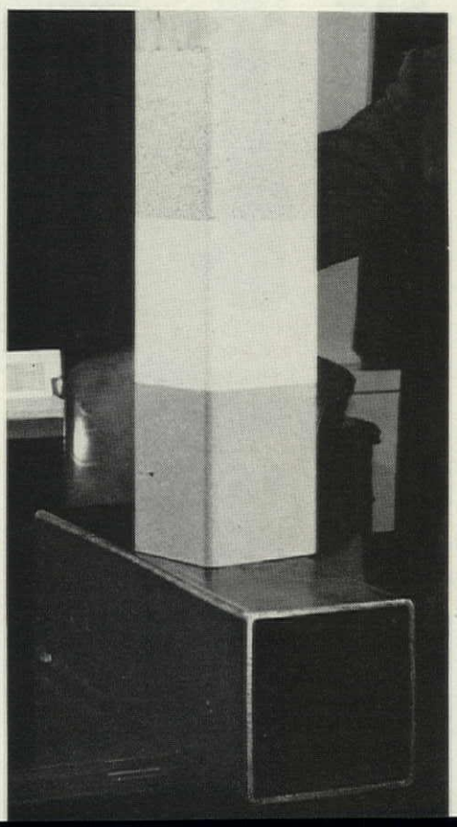
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DIAMOND HEIGHTS, RED ROCK HILL— Choicest and fairest in all San Francisco, will be sold on a simple dollar bid basis October 24, 1961 Here in the City's heart is a twenty-two acre residential site, pre-designed and developed for about one thousand apartments Available to developers are four architectural designs, chosen in national competition Write to San Francisco Redevelopment Agency, 525 Golden Gate Avenue, San Francisco 2, for Developers Guide Statement, DIAMOND HEIGHTS, RED ROCK HILL.

Structural tubing . . . wheeled terminal . . . dry-cleaning domes





SQUARE TUBING

It has long been acknowledged that the U. S. lags behind Europe in tubular construction (FORUM, March '60). Now, however, U.S. Steel's National Tube Division proposes to close that gap, or at least to narrow it considerably, by offering a variety of square and rectangular structural tubes which could mean important weight savings and more efficient construction. Based on tubing's high ratio of strength to weight, says U.S. Steel, this development could make buildings 30 to 40 per cent lighter, but just as strong, as those erected with regular rolled and fabricated members. National Tube is now hot-rolling its new sections from ASTM A7 and A36 carbon steels on conventional pipe mills.

In the first use of the new tubing, U.S. Steel's American Bridge Division built vertical columns of 5-inch-square tubing into the lightweight frame of an Elmira, N. Y. school (upper photo). These columns and the modular frame dropped the school's total cost $174,000 below the budgeted amount and added 7,962 square feet of building area.

While initial weight savings are tubing's chief selling point, the lighter steel frames lead to lighter footings and foundations, lower freight and handling costs, easier and faster erection. Readily workable, tubing bends well, flattens, cuts, punches, flares, and flanges easily, and can be welded by commonly used techniques. Tubing left exposed as a load-bearing column needs only buffing to a smooth finish and painting, without any further finishing or maintenance. Sample finishes are shown banding the 6-inch section at left.

First production will be of light tubing for one- and two-story light-frame buildings, i.e., schools, churches, shopping centers, hospitals, factories, and commercial buildings. Larger sizes for heavy and multistory construction will be available later. These sizes are available now: square tubing, 1 by 1 inch through 10 by 10 inches; rectangles, 3 by 2 inches through 10 by 6 inches; random lengths, 36 to 42 feet, and exact lengths not exceeding 42 feet. The standard surface is as-rolled hot finish, but other factory finishes may be requested. Prices will be comparable to other structural members.

Manufacturer: National Tube Division, U. S. Steel Corp., 525 William Penn Pl., Pittsburgh 30.

continued on page 61

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TERMINAL ON WHEELS

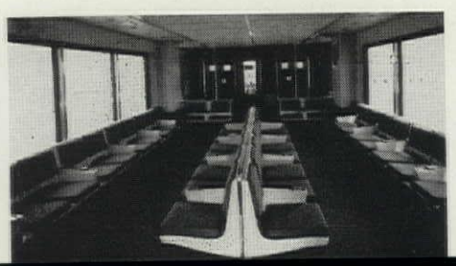
The Federal Aviation Agency is currently testing the prototype of the "mobile lounge" designed for Dulles International Airport, outside Washington, D.C., as a vital part of the Eero Saarinen & Associates–Ammann & Whitney plan. On orders from FAA Administrator N. E. Halaby, the prototype is getting just as thorough a going over as any new aircraft submitted for certification.

As originally proposed, a fleet of mobile lounges would shuttle passengers between terminal and plane positions, not unlike the buses used for some years at several European airports. The mobile lounge itself, however, will be a far cry from any airport bus. In appearance, the most striking difference will be one of size: the lounge will hold up to 90 passengers and carry-on luggage, will have a bulk comparable to that of eight intercity buses. Indeed, says FAA, it is the largest passenger-carrying vehicle ever built to run on rubber tires. In operation, too, it will be a departure, functioning as an actual extension of the terminal. One end buttons onto the terminal so that passengers can step directly into the lounge through double doors at each side of the driver's cab. The other end mates to the aircraft: passengers enter the aircraft doors through a telescoping ramp. Inside the lounge, which is fitted out with comfortable chairs, a carpeted floor, and space for luggage, the air will be properly heated or cooled, and filled with music piped in from the terminal. The vehicle is designed with two cabs and two engines so that it can be driven from either end without having to turn around. Under special conditions, such as heavy snow, both engines, operated from either cab, can supply additional power.

The prototype, built by Chrysler, adjusts to all four-engine aircraft in use today as well as any FAA foresees in the near future, either of domestic or foreign manufacture. It provides a means of sheltering the passenger from terminal to plane, keeping him out of the weather and away from aircraft noise and propeller blast. Besides saving wear and tear on passengers, the mobile lounge will conserve fuel for today's huge jets, which now eat it up in large quantities at low-altitude inefficiency while taxiing and maneuvering to gate positions.

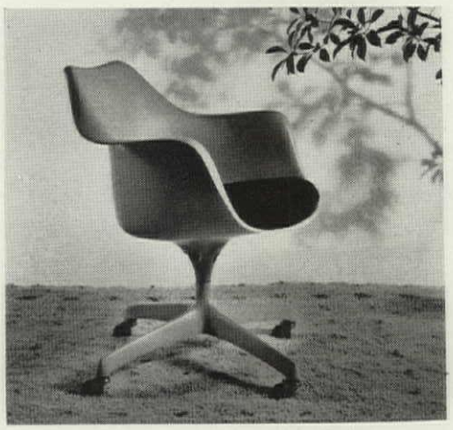
Manufacturer: Chrysler Corp., Centerline, Mich.

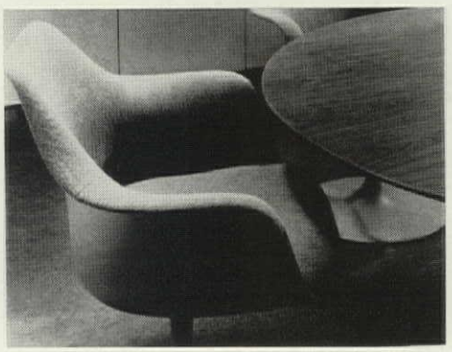




NEW KNOLL DESIGNS

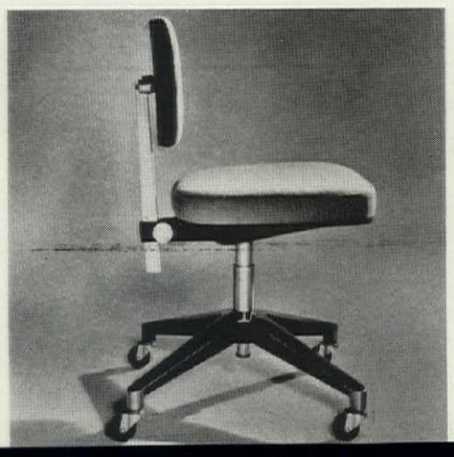
Two new versions of the famous Saarinen pedestal chair, introduced four years ago, are part of Knoll Associates' new line. The more radical of the two is a cushioned desk chair in which the pedestal branches into four legs mounted on wheels below a swivel mechanism designed by Knoll's Robert Savage. The base is cast aluminum finished in fused plastic to match the all-plastic shell of white, gray, or beige (a new color this year). The second and less startling version has a fully upholstered seat. A special Knoll process permanently bonds foam rubber to the interior shell contours for a more luxurious look and feel. In muslin, both chairs retail in the neighborhood of $155.



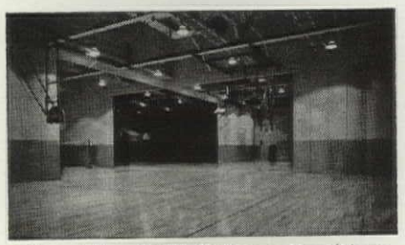


Another chair, a secretarial swivel model by Max Pearson of Knoll, tucks the mechanism under the seat for a neater appearance. To raise or lower the seat, one simply spins the sleeve around the center column. Flush-mounted aluminum knobs in the back shaft, below the seat, control tension and the back rest's position. Foam rubber pads seat and back, and a plastic covering shields sharp edges around the metal seat pan. Cost: about $122 in muslin.

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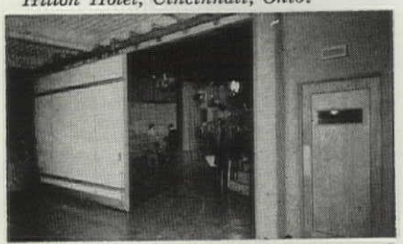
R-W FOLDING PARTITIONS



• *Four-Way R-W Folding Partitions, Janesville, Wisconsin Senior High School. Architects: Law, Law, Potter and Nystrom.*



• *R-W Movable Walls in the Netherland Hilton Hotel, Cincinnati, Ohio.*



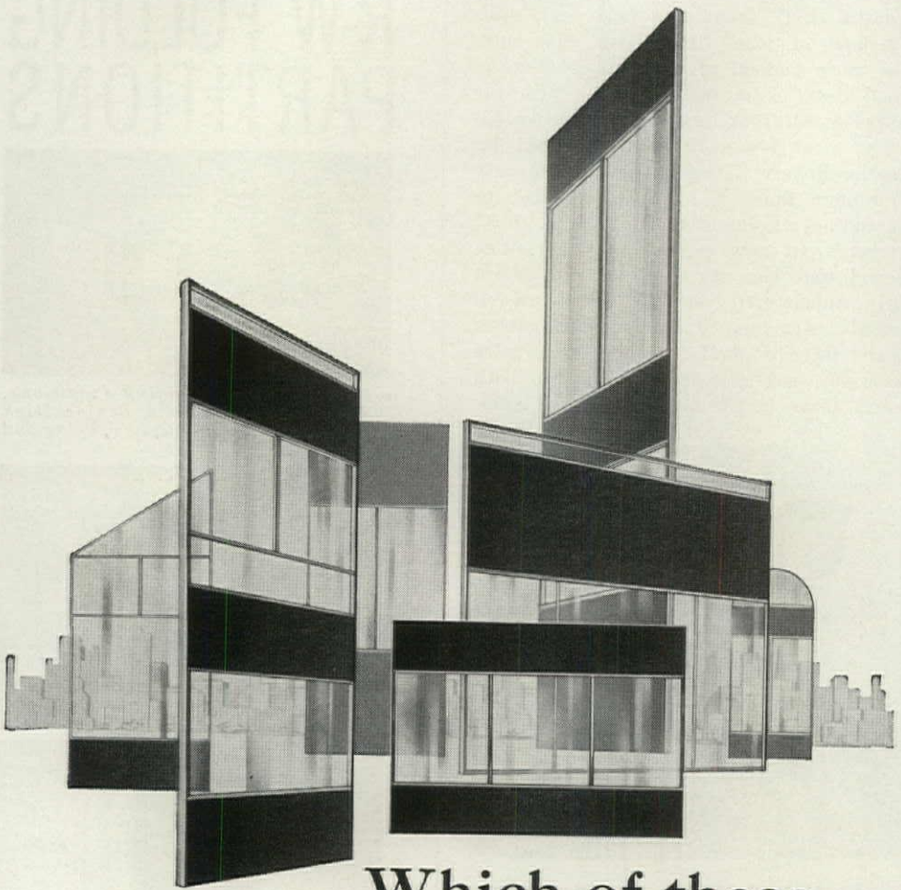
• *R-W Folding Partitions of a special sound retarding design in a Chicago TV Studio.*

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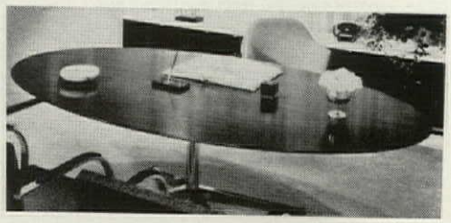
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The elongated oval top of a new small conference table (photo, below) is oiled rosewood, the supporting column chrome-finished steel honed to a high polish. Designed by Florence Knoll to be used as a conference table and/or desk, it costs $990.

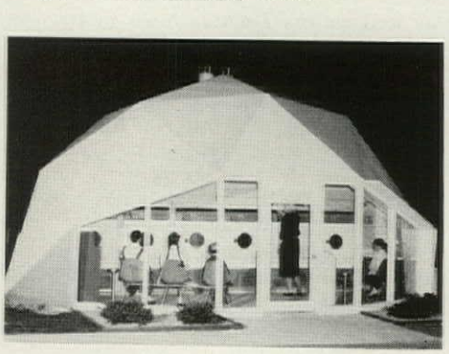
Manufacturer: Knoll Associates, Inc., 320 Park Ave., New York 22.



DRY-CLEANING DOMES

Geodesic domes pop up everywhere these days, housing activities of great variety. One of the newest is a dome enclosing coin-operated dry-cleaning units, the whole marketed as a package by Whirlpool. Pease Woodwork Co. of Hamilton, Ohio fabricates the domes of plywood frames and plastic overlays in two sizes, one 26 feet in diameter, the other 39 feet. These are essentially the same except for the arrangement of the machines inside. In both, however, the space is about evenly divided between places for customers to sit while keeping an eye on the cleaning cycle and room for mechanical equipment. So far, Whirlpool has built 15 domes, all except one in the 26-foot size. Cost for that size, including construction costs, six dry-cleaning machines, furnishings, and all equipment: about $25,000.

Manufacturer: Commercial Laundry & Dry-cleaning Equipment Div., Whirlpool Corp., Benton Harbor, Mich.



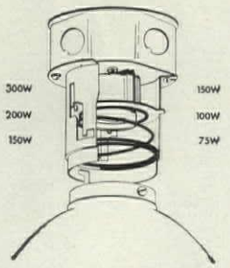
RECESSED LIGHTING

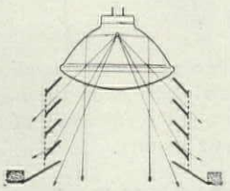
Over 100 recessed incandescent lighting fixtures, brand-named *Marco*, embody one or more of seven principles developed to give them high efficiency and unobtrusive design. Three of these principles are illustrated separately below.

The *Adjustomatic Hub* has a zigzag slot and a socket spring; these work together so that three sizes of light bulbs fit the same socket and are always in focus. This

device is particularly useful in installations subject to change. When more or less lighting is required, replacing the bulb and moving the socket up or down enable the same fixture to meet new standards.

The *Multicone Baffle* is diagonal instead of horizontal, and the metal casing around it perforated so that some light bounces up and out, reducing glare. Perforations also reduce the fixture's weight, a consideration in hung ceilings.

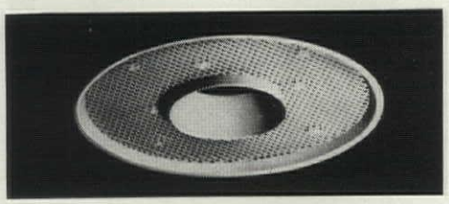


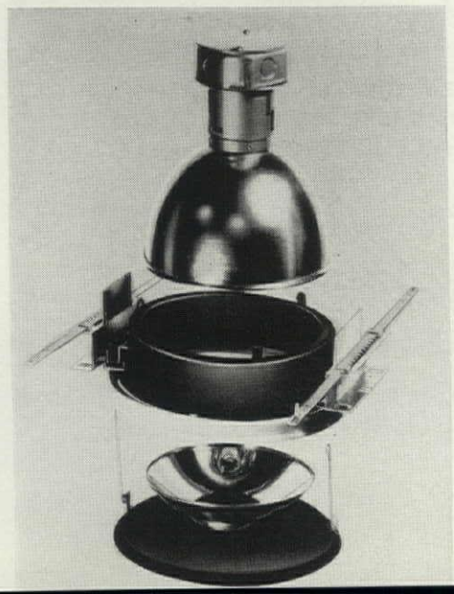


Plastoveil trim is a perforated lath around the aperture, to which plaster, acoustical tile, or other ceiling materials may be keyed. The fixture plate remains accessible but the whole fixture is less obtrusive.

Other design principles in the series: glareless reflectors, several reflector-and-lens systems, a universal bracket adaptable to many ceiling types and thicknesses, and deeply recessed fixtures with a minimum of trim. Bottom photo shows hub, bracket, and reflector.

Manufacturer: Marvin Electric Manufacturing Co., 648 Santa Fe Ave., Los Angeles 21. END

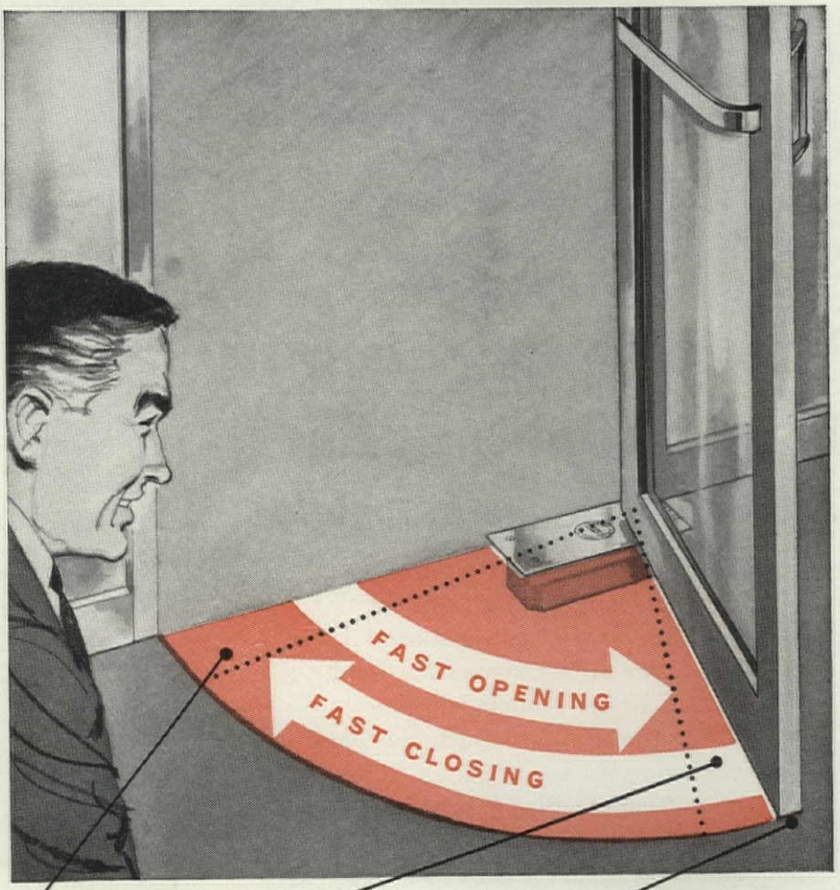




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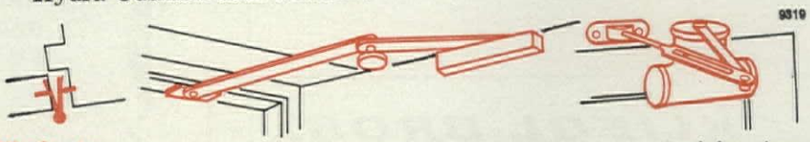
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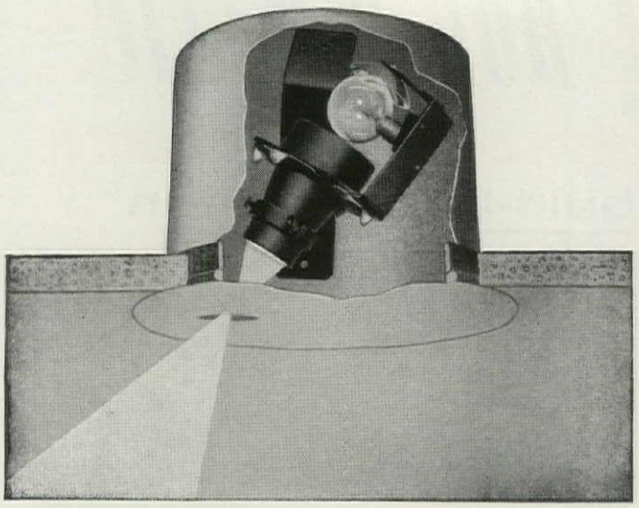
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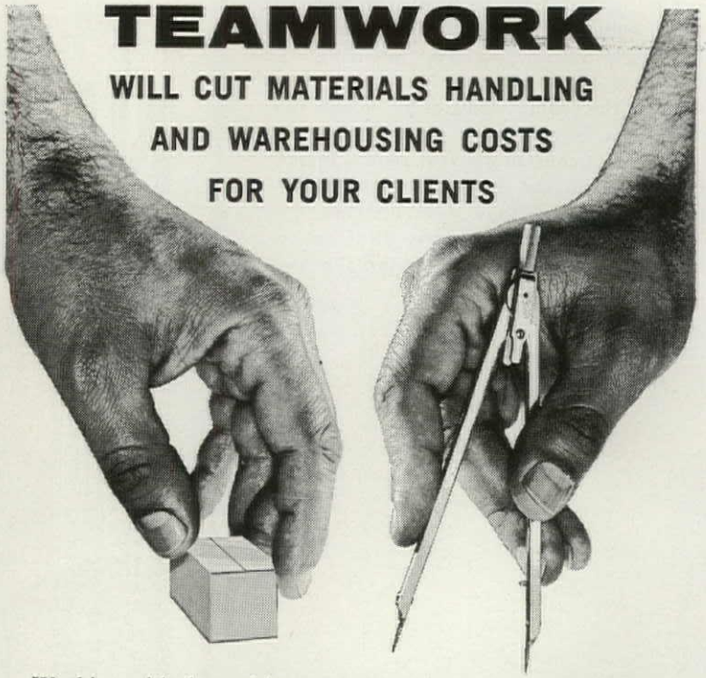
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Building for Peace

President Kennedy has asked all Americans to help him in the defense of freedom and the preservation of peace.

His appeal has special meaning for those concerned with the creation of structures—with the creation of the visible evidence of a civilization: for without freedom there can be no true creativity, and without peace there can be no construction.

So there is no question that the building professions and trades will respond to the President's appeal. The only question is how they can respond most effectively.

There are several answers, and FORUM will deal with them in forthcoming editorials and articles. But one answer suggested by a friend seems of supreme urgency: the U.S. building industry must help provide housing for millions in underdeveloped nations which need this kind of help even more desperately than they need food and medicines.

This friend is Patwant Singh, editor and publisher of several important Indian magazines of architecture and building. Mr. Singh visited the U.S. recently, and in talks with FORUM editors and others stressed the point, again and again, that the millions of Indians who remain *un*housed, not just *under*housed, are close to utter despair, and will turn to violence and communism unless effective help is offered without delay (there are 650,000 people sleeping in the streets in Calcutta alone). The U.S. building industry is quite capable of offering that kind of help, not only in Asia, but in Africa and Latin America as well.

Mr. Khrushchev is very much aware of the desperate need for shelter among the world's unhoused: in the new, 20-year program for the USSR, free housing occupies a prominent place. Whether the Soviets achieve free housing for all by 1980 or not is beside the point; they are persuading the world's unhoused that free housing is on its way, and that promise, for the moment, is almost as effective as the accomplished fact.

Almost—but not quite. It is in our power to counter Khrushchev's promises with solid accomplishments. Here is what is being done now:

Item: The program of the Alliance for Progress for Latin America includes an offer of about $100 million for self-help housing, aid to savings and loan associations, and loans to public housing authorities. This is a good start; there should be more of the same in Latin America and elsewhere.

Item: In Calcutta, the Ford Foundation is providing consultants under an $800,000 grant to the city's own planning organization, which is undertaking a massive redevelopment scheme in which housing plays a major role. Among the types of shelter being investigated for this project are plastic-and-bamboo geodesic domes costing some 300 rupees ($63) each. This is one of several examples where U.S. technological mastery has been exported successfully. (It makes little sense to export U.S.-made buildings or components, for these are too costly to make here and to ship.) Again, a good start; there should be more of this as well.

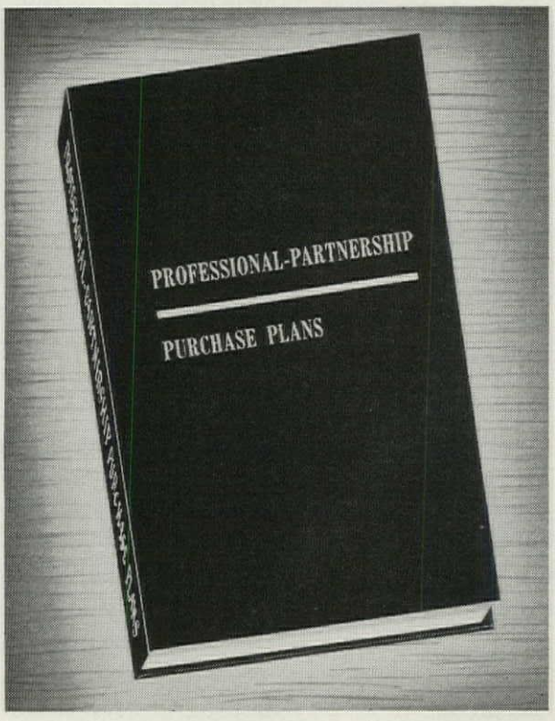
Item: The UN, with technical help from the U.S. and other countries, has set up a Regional Housing Center in Indonesia. The Center has been assisted by experts from the University of Michigan, including ex-FORUM Editor Ted Larson. The mission of the Center includes the development of house types and other housing structures suited to Indonesian conditions.

continued on page 87

Just Published

For Architects . . . send for your complimentary copy of this book that tells . . .

How a partnership "Buy-Out" agreement can protect your business and your estate



This authoritative 94-page book has just been published and is available without charge to professional men. Written by Alden Guild, J.D., in collaboration with Deane C. Davis, President of National Life of Vermont, and David F. Hoxie, Associate Counsel of the Company, it is a useful guide to the successful formation and funding of professional-partnership purchase agreements.

TO PROTECT YOUR PARTNERSHIP INTERESTS AND YOUR ESTATE YOU SHOULD BE FAMILIAR WITH THE SUBJECTS COVERED IN THIS BOOK. A PARTIAL LISTING:

Professional partnerships described • Why a business-purchase plan is desirable • Entity-Purchase and Cross-Purchase plans described and analyzed • Advantages and disadvantages of available plans • Detailed discussion of the tax consequences • Valuation of a partner's interest • The problem of "good will" • Use of a Trustee • Recent tax rulings • References to pertinent cases • Specimen Agreements

This new book — *Professional-Partnership Purchase Plans* — is must reading if you have now, or are planning to form, a partnership with one or more members of your profession. Authoritatively written in a direct, easy-to-comprehend style, it will bring you up to date on the latest developments in the professional partnership field . . . and the benefits you can expect from a sound partnership-purchase agreement.

The book is comprehensive . . . covering how best to protect your own estate and your partnership with an adequately funded "buy-out" agreement . . . what tax benefits you should look for . . . how the "good will" of each partner can be provided for. Through a study of typical case histories, the book will increase your ability to judge and select the proper plan to fit your own situation when you sit down with your attorney and underwriter to review or set up your partnership-purchase agreement.

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Without a partnership-purchase agreement a large part of the value you have built up in your business over the years may disappear at your death. While your partner or partners may wish to compensate your estate for your share of the firm's assets and for the continuing business your reputation brings in, a precise cash value is difficult to determine. Frequently this situation leads to costly litigation and delays in settling your estate. Alternatively, as a surviving partner, you are faced with the problem of compensating your deceased associate's estate.

With a partnership-purchase agreement an exact amount of compensation will have been agreed upon in advance of a partner's death. Tax liabilities will be minimized. Settlement can be completed quickly and to the satisfaction of all parties, *including the Internal Revenue Service.*

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Editorial
continued

An excellent start, and there are several similar examples in other countries. But, again, it is just a start.

Item: Union Carbide is developing foam core panels for housing with help and guidance from HHFA's Office of International Housing. Similar work is going on at Koppers. The idea is to help underdeveloped countries to establish their own industries to develop such components by providing these industries with our technical knowledge. In South Korea a plant has been built with help from the State Department's International Cooperation Administration to produce a hardboard for housing using native materials —sugar cane and rice fiber. In one U.S. college, ICA and HHFA are financing research into the production of building blocks made of stabilized earth. And there are other examples of such work in other places.

All these are worth-while efforts. But, as Dan Hamady of HHFA points out, there just isn't time to talk about long-range plans for improving housing conditions when two-thirds of the world's population live in filth and squalor. The kind of aid that is needed at once should consist of five separate but related actions:

First: Industry and government, working separately and together, should finance research in the U.S. to develop mass-produced shelter using industrial materials that can be manufactured in underdeveloped nations.

Second: Industry and government should help establish plants in those nations to produce such industrialized shelter. These plants should be licensed or endowed with necessary patents and other information developed in more highly industrialized countries.

Third: Industry and government should establish scholarships at U.S. colleges for the training of young men and women from underdeveloped nations in the arts and sciences of urban and rural housing.

Fourth: Programs (like Point Four) involving the dispatch of U.S. housing and planning technicians to underdeveloped nations should be greatly strengthened.

Fifth: Financial aid for urban and rural renewal should be greatly increased, either in the way proposed for Latin America, or by the use of foreign aid "counterpart funds" (as was done in Europe after World War II).

These are specific proposals. They should be implemented now—not because Khrushchev has promised free-housing-on-earth, but because, as the President has put it, it is *right* for us to help.

Quote . . . unquote

"Nearly every main street in America is an affront to the senses. . . . As for most of our public statuary—it is, quite literally, for the birds. The pigeons know bad art when they see it."—*Critic Marya Mannes.*

"America, still living in a nineteenth-century dream of individual enterprise, is not yet well equipped to tackle the job of developing architectural solutions on an urban scale." —*Architect George Nelson.*



←≪ "Our wrought-iron ornamental parking meter planters . . . have been in use in Erie, Pa. for five years. . . . They certainly are a beautiful sight." —*Letter from the Bartone Welding & Ornamental Iron Works, Erie, Pa.*

"With fashionable change slowly getting the better of invention, a kind of bargain Taj Mahal and other irresistible bazaar novelties are infiltrating architecture as portents of failure."—*Architect Bernard Rudofsky.*

"We are not only concerned with the immediate problem of securing housing for [African] diplomats. Our fundamental objective in this field is to ensure that policies in our Nation's Capital reflect truly the democratic concepts of justice and decency that we espouse all over the world." —*State Dept. Protocol Chief A. B. Duke.*

"The square world will never & has never stopt bugging the hip muse."—*Beat Poet Allen Ginsberg.*



Campus beat . . . and offbeat

A new quadrangle at Brandeis University strikes rhythmic contrasts in its siting, its structure, and its materials.

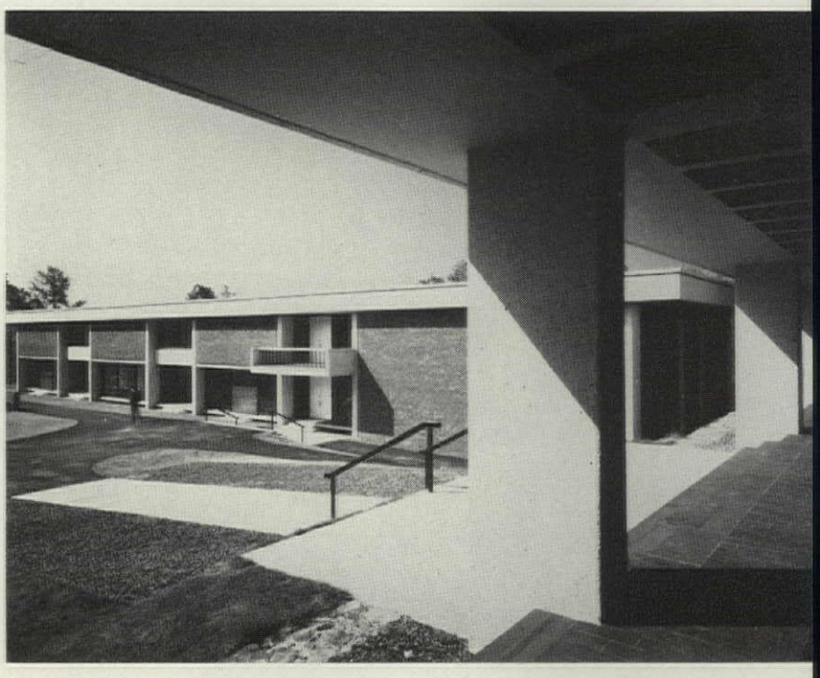
This group of three academic buildings forming a new quadrangle at Brandeis University in Waltham, Mass. not only makes interesting architectural photographs; it also is repeatedly interesting to see—two circumstances which are by no means always coincidental.

Perhaps the best clue as to why these buildings are interesting (as well as elegant) is contained in the architects' description of their unifying structure of monolithic concrete: "It has a structural column 'beat' of 28 feet and an 'offbeat' of 18 feet."

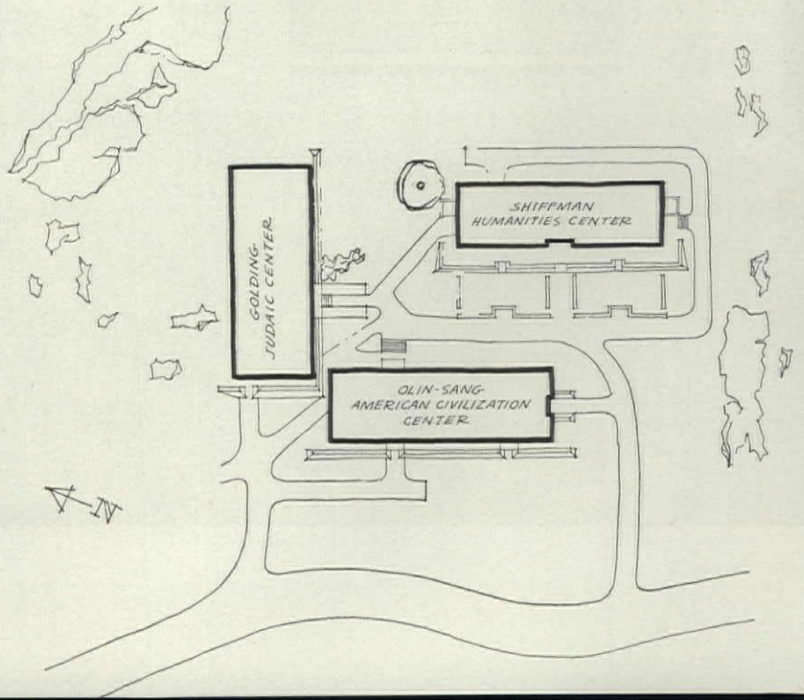
This columnar rhythm can be seen in the façades and in the floor plans (overleaf). But the theme of beat and offbeat pervades the entire design concept as well. It is a theme too well under control to appear erratic, yet too strong to appear static. For example, the two-story American Civilization Center building is brought close to the corner of the one-story Judaic Center building to dramatize a difference in height (photo, left). On the opposite side of the court, the two-story Humanities Center, spaced to stand alone, is raised almost a story above ground to strike an offbeat balance in a vertical and horizontal composition.

The site, too, is naturally offbeat, rolling and rocky. To make the most of this, and to strike a contrast with the impeccably finished concrete, the architects used offbeat bases: massive, rough granite walls. Within the quadrangle, brick walls provide a further surprise, if a partially accidental one. Constructed for future gardens, they interestingly divide the space (photo, next page). But, being unfinished, they almost suggest ruins, raising the question: Are they very new, or very old? The architects half hope they remain unfinished, leaving the question forever hanging.

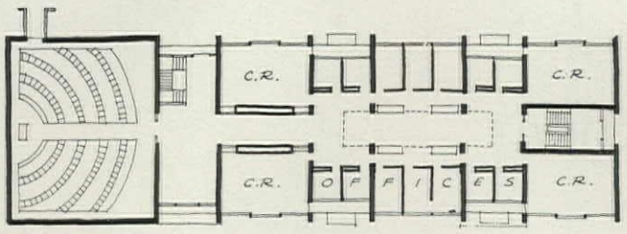
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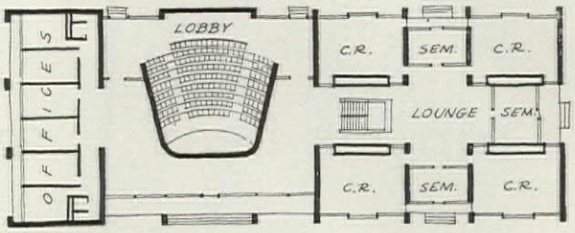
New academic quadrangle *at Brandeis University occupies a rocky, plateaulike ledge commanding fine views of the campus. The photograph on the opposite page is a view of the northwest corner of the quadrangle, with the buildings oriented as in the plan below. The photograph above is taken from the portico of the Judaic Center, looking toward the American Civilization Center.*



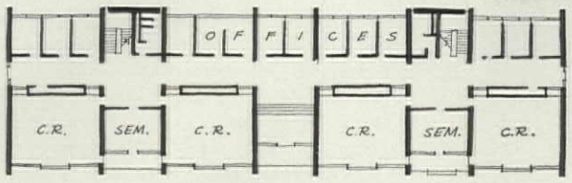
PHOTOS: © EZRA STOLLER ASSOCIATES



OLIN-SANG AMERICAN CIVILIZATION CENTER

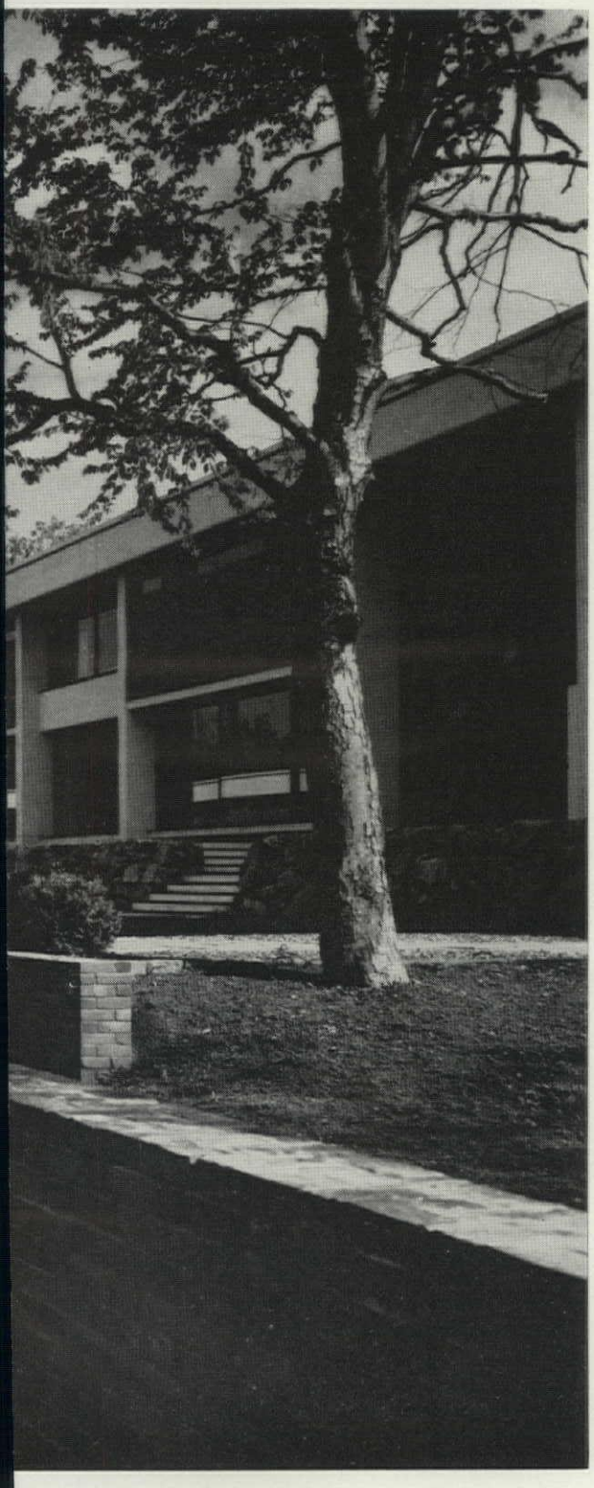


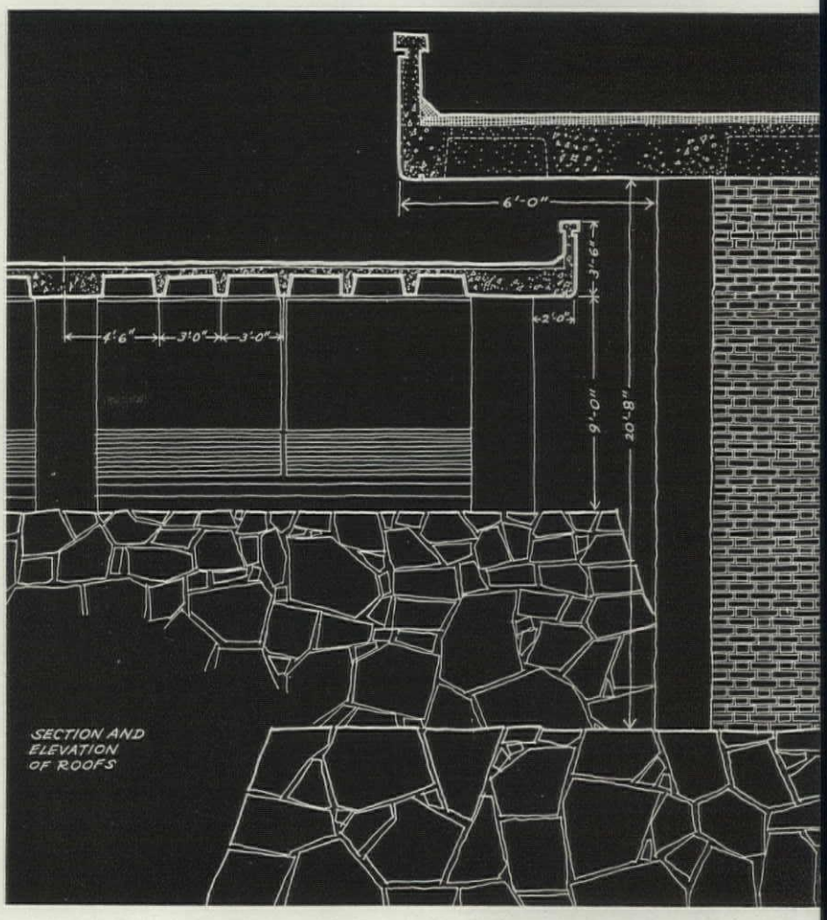
GOLDING JUDAIC CENTER



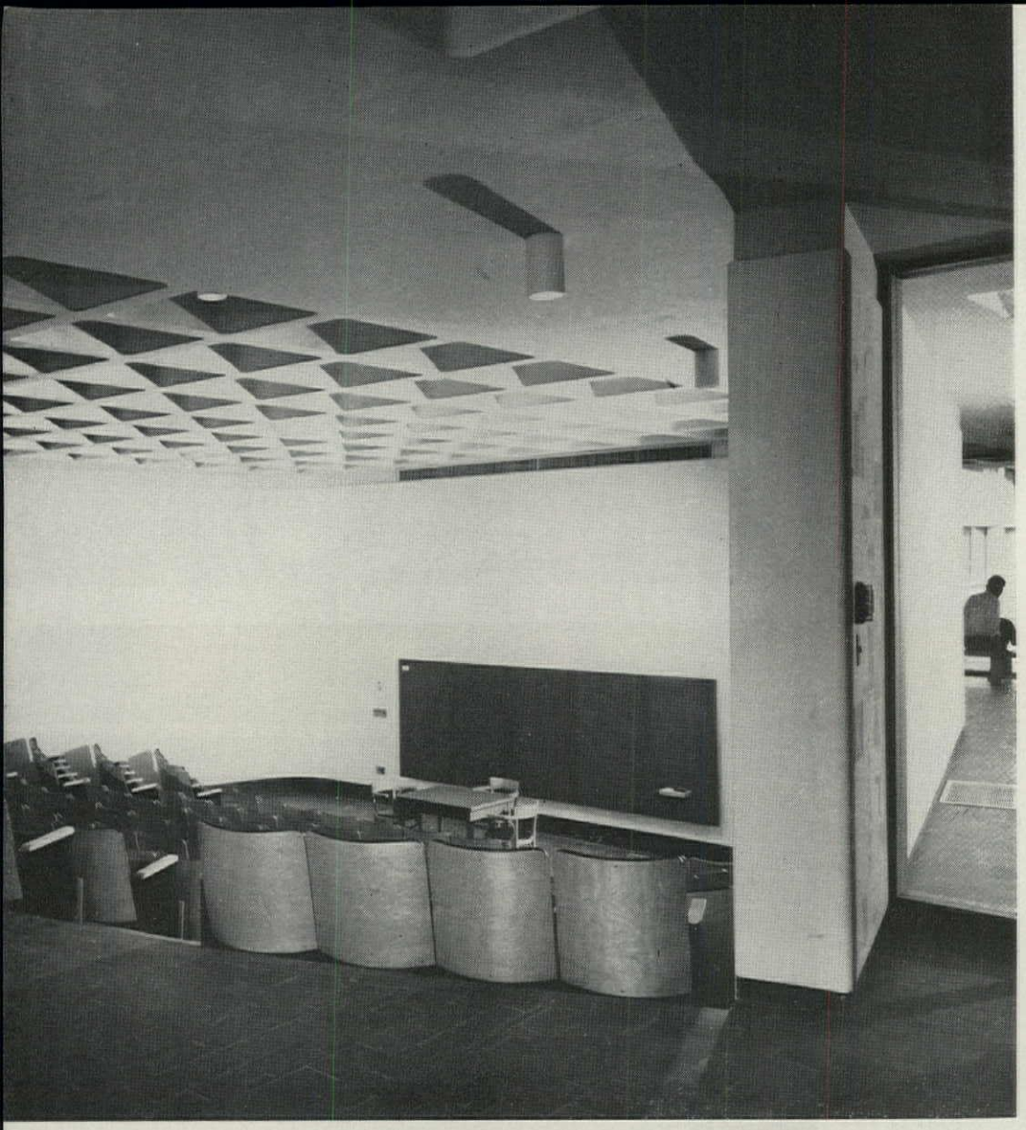
SHIFFMAN HUMANITIES CENTER







Roof relationships *of the one-story Golding Judaic Center and the two-story Olin-Sang American Civilization Center are shown in sketch and photo above. The roof structures, as shown in the section through the overhang of the Judaic Center, are concrete coffers, cantilevered and terminated in a parapet. The panoramic courtyard view (left) shows the Shiffman Humanities Center completing the group at the right, behind brick terrace walls built for future gardens. Floor plans are placed above their corresponding buildings.*





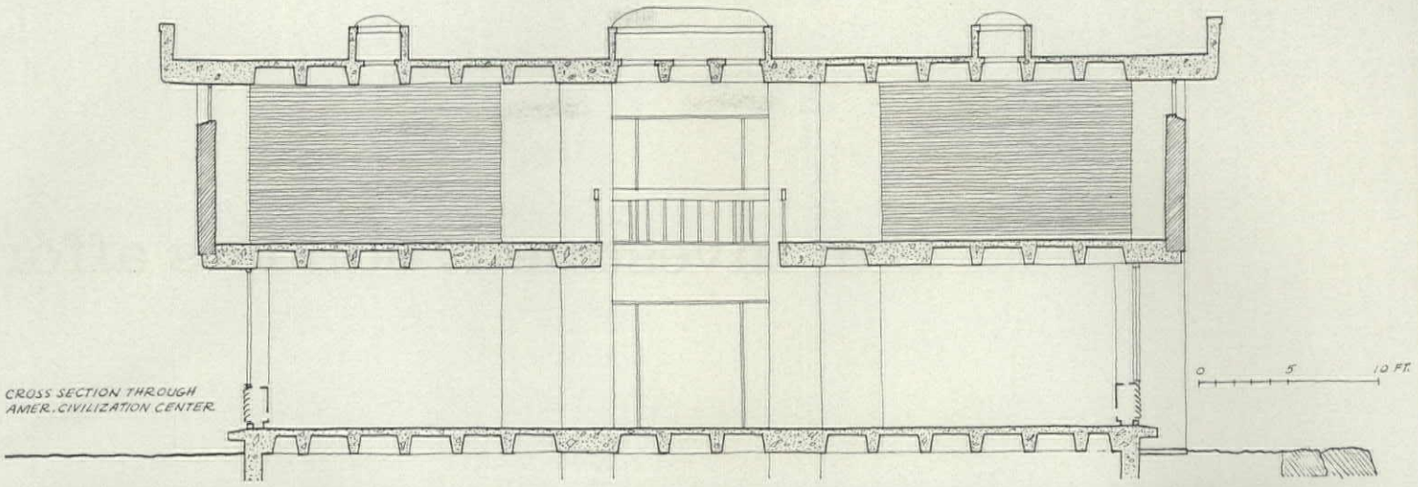
Interior views *show the auditorium in the Golding Judaic Center (left), a typical classroom (left, below), and the central hall in the Olin-Sang American Civilization Center (opposite). All three photographs show different interior effects produced by the concrete coffer roofs. The section above the photo of the central hall shows how the skylights there are introduced into the coffers.*

The elegance of the buildings comes, as elegance usually does, from attention to details, but most particularly in this case to the design of the reinforced concrete structure and the composition of the concrete itself. The mix is a very dense one, and the sand and aggregate were carefully selected for color and texture to produce a pronounced stony finish. All exposed surfaces were bush-hammered; to make continuous surfaces for the hammering, all edges and corners are rounded.

The roofs are formed of poured-concrete coffers, with the edges cantilevered out to protect the walls; the strong, wide roof line is actually a parapet "bent" upward. On second-floor classrooms, the architects used as much solid wall as they could, to give big, simple surfaces for the shadows of the eaves to play on. Walls are brick backed with block, and the mortar is colored with brown and red dye to correspond with other buildings nearby.

The Brandeis campus, 13 years in the building, boasts the works of seven architectural firms thus far. This group is the second commission for The Architects Collaborative. Architects Harrison & Abramovitz, in charge of the master plan (originally laid out by Saarinen), follow a policy of encouraging individual architectural styles, but usually propose that a group of related buildings, like this one, be developed by a single firm, and that there be reasonable similarity in materials used.

ARCHITECTS: The Architects Collaborative; Benjamin Thompson, partner in charge; Terry Rankine and W. Lawrence Garvin, job captains. STRUCTURAL ENGINEERS: Goldberg LeMessurier & Associates. MECHANICAL AND ELECTRICAL ENGINEERS: Reardon & Turner. GENERAL CONTRACTOR: G.B.H. Macomber Co. Cost (incl. fees, excl. landscaping): $1,579,981, or $24.91 per sq. ft.



CROSS SECTION THROUGH
AMER. CIVILIZATION CENTER.

Can investment builders afford

Some weeks ago, FORUM *asked B. H. Friedman, a young New York realtor, to write an article setting forth his reasons why the average investment builder rejects the best in U.S. architecture in favor of designs that might be described, with politeness, as "routine."*

Mr. Friedman's article, which appears below, is so strong a criticism of the work of leading American architects that FORUM*'s editors felt it should not be published without comment. That comment appears* *on page 96.*

Mr. Friedman's credentials are impressive, both on the business side of the fence and on the side of art. He is an executive with one of the most prominent New York real estate firms, and has been for several years. He has written frequently for magazines, and last year edited a book, School of New York: Some Younger Artists, *which was published by Grove Press. His first novel,* Circles, *will be published next year. He is a collector and patron of modern painting and sculpture. The opinions voiced in his article do not necessarily reflect those of the firm by which he is employed.*

The question was put to me this way: Why do some investment builders choose a "commercial" architect in preference to a "prize winner"?

A simple question, demanding a simple answer.

The answer is: Because some investment builders have found "prize winners'" work prohibitively expensive.

First, I made lists of firms and tried to place them in categories:

Commercial architects: Emery Roth & Sons, Sylvan Bien, H. I. Feldman, Morris Lapidus, etc.

Prize winners: the late Frank Lloyd Wright, Mies van der Rohe, Eero Saarinen, Philip Johnson, Pietro Belluschi, I. M. Pei, Edward Stone, etc.

There was a list I hadn't touched, a list somewhere in between the so-called "commercial" firms and the "prize winners." For lack of a better label I thought of them as the "corporate prize winners": Skidmore, Owings & Merrill, Harrison & Abramovitz, Welton Becket & Associates, etc.

In terms of more popular labels these groups seemed to me, respectively, low brow, high brow, and middle brow—or, way in, way out, and dead center.

But a choice must be made. Sadly, the real choice is between what is commercially routine (and attractively priced) and what is creatively individual (and prohibitively priced). The obvious compromise is the corporate prize winner. Or, to combine a Mies with a Kahn & Jacobs, a Belluschi and a Gropius with an Emery Roth & Sons.

Speed is of the essence

What does the "commercial" architect have to offer?

Perhaps his most important characteristic is speed. These commercial firms get out their plans fast. They expedite filing and approval by the building department. They avoid designs requiring code variances. They think in terms of what has been done, what has been proven. Their designs are practicable, familiar, easy for contractors to bid on. All of this means savings to the builder, which can be passed on as savings to the owner or tenant. A minimum number of changes are made in the course of a job.

Speed means, first of all, a saving in carrying charges. While waiting for final approval of plans and while a building is being constructed, these charges mount relentlessly: real estate taxes, ground rent (frequently), interest on money, organizational overhead. A job on which I am working now has all of these carrying charges. They run close to $300,000 per month—$10,000 per day. Enough said.

Then, changes are expensive, not only in terms of time, but because the owner is generally at the contractor's mercy on a change which was not anticipated and for which there is no fixed price. On a recent job a prominent corporate prize winner redesigned a luminous ceiling about 12 times. Costs finally ran triple the original estimate. Air-conditioning ductwork was held up, entailing additional charges. Occupancy was delayed several months. . . . Another prominent firm, representing a comparatively small space user in a multitenanted building, fussed with the detailing of a movable partition for almost a year after every other tenant had moved into his offices. . . . Another reviewed marble samples in Italy while lobby details were held up, ultimately delaying the opening of the building. . . . Another had the plastering on several walls chopped out twice because it was ⅛ inch untrue. Finally this firm decided that accurate workmanship could be achieved only by the use of

good architecture? By B. H. FRIEDMAN

prefabricated sections. . . . These are just a few examples of what the commercial architects try to avoid. The prize winners' striving for perfection is commendable esthetically; it is indefensible economically.

Contractors know this, too, before they get out into the field. The familiarity of plans and specifications is important to them. They protect themselves against the unknown. Standardization may mean monotony; it also means economy.

Less important than these economies is the fact that the "commercial" firm can charge a lower fee. The work of such firms demands less exploration (again, less time, fewer man-hours). They work, generally, for experienced builders and can therefore forego supervisory charges. Their detailing is sometimes less demanding, as well as a great deal more familiar; this is reflected in lower bids.

From the "prize winners" a builder buys art. It is one of the unhappy facts of contemporary life that art is a luxury. It takes time. It costs extra money. Point by point, as has been indicated, the builder of a work of art is likely to be faced with just the opposite of what the commercial firm offers.

Carrying charges are crucial

As plans are developed slowly and thoughtfully, carrying charges increase. As changes are necessitated by the organic growth of an architectural concept, budgets are exceeded. As new solutions to problems are attempted, costs run wild and contractors run for shelter. And fees must be high, because without the supervision of the architect, his attention to every detail, a work of art could not be built.

What are we talking about in terms of extra cost? Is there only a small premium for art? No, the premium is enormous. When Lever House was built (1952) an analysis of its costs indicated that they were about double those of commercial buildings of similar size: that, put on a rental basis, Lever House would have had to charge $6.50 to $7 per square foot in contrast to the then going rate of $4.50 to $5. More recently Seagram House was built at a published cost of $43 million as compared with more routine commercial buildings of similar size which cost in the neighborhood of $15 million. Seagram House has had to seek rents as high as $9 per square foot while, at the same time, average buildings were renting for about $5.50.

How can original, magnificently designed buildings be justified? Economically, they can't be. Most builders, competing in a rental market, react with something like economic indignation when they hear these costs. The only justification is prestige or public relations or advertising or art. Call it what you will, esthetic responsibility is expensive. If the general public has no idea of *how expensive,* this is so partly because of the way that costs are reported. On the one hand, the institutional builder, erecting his monument, is anxious to reduce costs in the eyes of the shareholding public. Carrying charges are often "lost." Real estate taxes in particular may be thrown into a general tax classification without showing clearly that this should be charged to construction. Similarly, interest on money for construction may appear simply as corporate debt charges; or a company may borrow from its own capital without charging itself for this money, even though it could be earning interest. Luxurious partitions, built-in units, expensive wall coverings, etc., are excluded as "furnishings." Staff time (managerial, legal, etc.) is excluded. Renting expenses, relating to space for expansion, are excluded.

On the other hand, the investment builder, seeking a mortgage based, generally, upon two-thirds of the appraised value of the property upon completion, must be aware of the confusion in the public's mind between value and cost, and so he tends to give his buildings an inflated value. So the differences in cost appear slighter than they are.

Rent differentials affect the availability of financing. Like the builders themselves, institutions want safe investments, buildings that can rent in a competitive market and still show a margin of profit after carrying charges. And if renting should be slow, they want to know that the owner can drop his rentals to a level—perhaps even a break-even point—low enough so that renting can be accomplished even in the close-to-worst market.

What is the function of a building?

It has been argued that during a depression the outstanding buildings will take tenants away from those that are more routine. They will, but only if their rents are directly competitive. If they are not, tenants are going to move to the buildings which function best for them—which means, also, function best economically. Ideal architectural concepts are, however, sometimes unfunctional as well as uneconomic. For example, Lever's small floors might force a vertical operation on departments which would function more efficiently and economically in horizontal operation, on large floors. Or, to take a different kind of example, the Guggenheim Museum functions hardly at all in terms of its purpose, but rather, as a virtuoso sculptural-spatial performance. (I know of no more extreme case

in architecture of the functional misuse of time than in this museum which urges people to move past its art as quickly as moving past billboards on a highway.)

To play for a moment with the words of two of the greatest twentieth-century architects, investment builders have become convinced that *less costs more*, the reason being that "simpler" details generally cost more to build. They believe also that, whether from the point of view of investor or occupant, a building is a *machine to make money*.

What, then, can be done to get better architecture into investment building?

Art is a luxury

Perhaps the first job is one of education, of teaching people to appreciate (and pay for) better architecture. Let's face the fact, right off, that the insides of the ITT, Seagram House, and the Socony-Mobil buildings (to choose examples from the three categories established earlier) all *function* just about the same. In each of these buildings, the tenant's space is properly illuminated and air conditioned; the floors carry the proper loads; the elevators carry the proper number of passengers at the proper speeds; etc. The major differences between the buildings are in their exteriors. I take it for granted that everyone can see that Seagram House is the most beautiful office building in New York. But, perhaps I take too much for granted. I once wrote an article on the Four Seasons restaurant in which I emphasized the luxurious, expense-account, tax-deductible aspects of this restaurant and the building in which it is housed. Many people assumed that I didn't like Seagram House. I like it, the way I like a Rolls Royce; I'm also aware of what it costs. But how can you get people to pay more, if they can't see the difference?

One way is on grounds of snobbism, or pride, or what I earlier referred to as prestige. These are, I believe, the grounds on which the best buildings have been built. There has been little economic justification, only an esthetic-moral justification. There have been a few individuals who cared: Bronfman's daughter in the case of Seagram House; Luckman in the case of Lever House; David Rockefeller in the case of the new Chase-Manhattan Building; John D. Rockefeller Jr. in the case of Rockefeller Center.

Without individuals who care—and who can afford the luxury, now, of caring—dollars will continue to design buildings. The economic pressures in New York (particularly the high cost of land) combined, until recently, with antiquated zoning laws, have created a situation in which every economic reward went to the builder who could turn out the most efficient space in the shortest amount of time and at the lowest cost. James Felt's new zoning resolutions have done away with the set-back envelope, and, in the future, an owner will be rewarded for a public plaza. But a Seagram House is more than a clean slab. And a Guggenheim Museum is much more. More and less: the economic pressures continue.

Architecture, of course, is not just isolated buildings; it is buildings in relation to a site, at least, and preferably in relation to an over-all plan. Seagram House is crowded and arbitrary to the east; it is a Park Avenue building. The Guggenheim Museum is similarly crowded to the east, and to the north and south as well; it is a Fifth Avenue building. The greatest buildings do not front on avenues in this way. They don't depend so much on their addresses. They depend, rather, upon themselves in relation to a plan. The possibility of that plan is slight, in terms of a free-enterprise economy in which the profit motive dominates. It exists when government, at whatever level, steps in and acquires large sites (e.g., Lincoln Center). It exists when very big business steps in and does the same thing (e.g., Kip's Bay).

These enormous projects are rarities. Until they become more frequent, the isolated examples of exciting architecture will have to suffice—in a context of more routine, commercial work. I am not sure this is so bad. Part of what makes New York visually exciting, part of its vitality is due to the concentration of its buildings, the arbitrariness of its sky line, and the wild juxtaposition of its façades.

Forum's comment:

Mr. Friedman's arguments are four:

1. Many investment builders believe that good architecture costs significantly more than routine architecture.

2. Many investment builders believe that they cannot afford that extra cost.

3. Many investment builders also believe that the reason good architecture is expensive is that good architects are often impractical.

4. Many investment builders believe that good architecture requires more thought, care, and pride than routine architecture.

These four suppositions are worth individual comment.

▸ The generalization that good architecture costs significantly more than routine design is, to say the least, debatable. The world is full of bad buildings constructed extravagantly (as well

as bad buildings done cheaply). On the other hand, numerous buildings combining excellent design and admirable economy can be found in many places, even in Mr. Friedman's article: Architect I. M. Pei's Kip's Bay Apartments (FORUM, Aug. '61) were built for a price near that of standard apartments and they are generally agreed to be among the finest looking apartment structures put up in New York (and elsewhere) in some time—and not only because, as Mr. Friedman would maintain, these apartments enjoy unusual size and site conditions.

▸ The argument that the investment builder cannot afford to pay the supposed extra cost of good architecture is surprising in view of a recent article by another New York realtor, Daniel M. Friedenberg, which appeared in *Harper's Magazine* three months ago.* In this article Mr. Friedenberg states that "most builders now feel a job is losing money if they do not 'get their money out' in six or seven years—which means a 14 per cent to 17 per cent profit per year." Mr. Friedenberg adds that this profit accrues before the builder takes advantage of the taxfree accelerated depreciation available to most investors in physical structures and equipment.

▸ The argument that good architects are often impractical seems to be contradicted by the fact that many of them have very demanding corporate clients who continue to commission buildings by these same architects. It also seems to be contradicted by many investment builders themselves, for most of the important innovations of recent times in large-building design have come from the drafting boards of architects not often favored, at least openly, by investment builders. One thinks of such major advances as the curtain wall, the flexible, modular floor plan, the arcaded building on stilts, the plaza plan—all of them the creations of allegedly impractical men, all of them today favored by investment builders.

▸ Finally, the argument that good architecture requires more thought, care, and pride—and, hence, more time—than routine design is correct. And, as Mr. Friedman indicates, such extra time may be extra money, at least during the design phase of a building. Yet, these same efforts employed during the design phase have often saved a great deal of time and money during the subsequent construction-and-maintenance phases—viz. the major design advances listed above. Moreover, no industry in the U.S. expects to make use of new design concepts without paying for them: everybody, from button-makers to missile-makers, allocates a substantial part of his budget to research. Outstanding builders are doing the same.

In the end, as may be inferred by some of Mr. Friedman's asides, the entire argument boils down to a question of values—moral, social, and esthetic.

Mr. Friedenberg, in *Harper's*, said this: "When the public allows the quest for profit to dominate architectural values . . . it is accepting a monetary perversion which seems beyond that of any known previous civilization."

Mr. Friedman, on the other hand, states in FORUM that "investment builders have become convinced that . . . a building is a machine to make money."

Is it? Or does it have some other purposes, possibly more important?

An analogous question was recently put to 1,700 businessmen by the editors of the Harvard *Business Review*, in the course of a study on business ethics. The businessmen were asked to comment on this statement which had appeared, deadpan, in *Advertising Age*: ". . . the businessman exists for only one purpose, to create and deliver value satisfactions at a profit to himself. . . . If what is offered can be sold at a profit . . . then it is legitimate. . . . The cultural, spiritual, social, and moral consequences of his actions are none of his occupational concern."

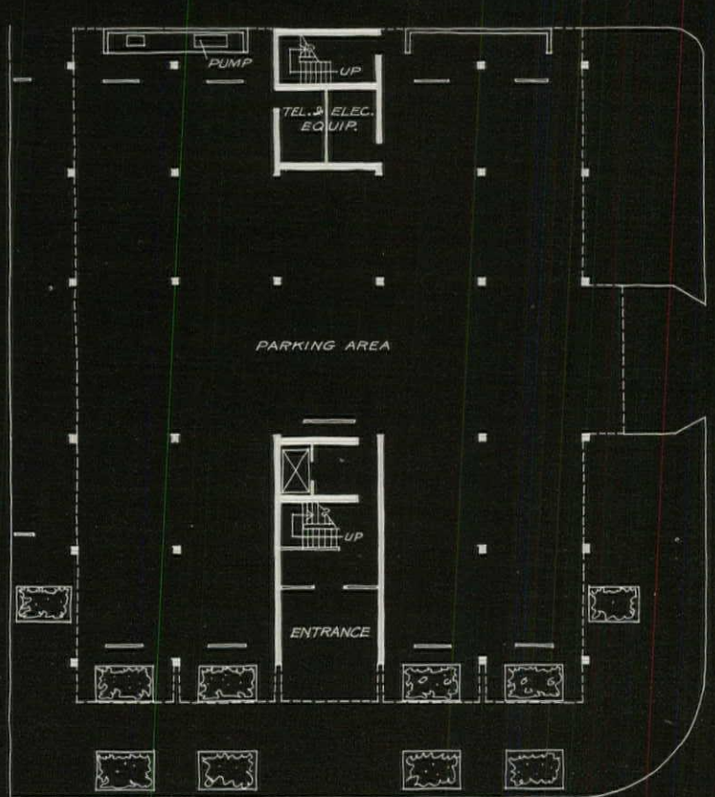
Reporting on the answers, the *Business Review* says: "From top to bottom of the corporate ladder, a convincing 94 per cent say: 'We disagree!' As one personnel director sees it: 'This man lives in a vacuum, ignoring the society that gave him his opportunity, his responsibility to make it better rather than worse as a result of his existence.' . . . In fact our respondents indicate that they regard untempered profit maximization as immoral. . . ."

Whether the investment builder realizes it or not, the very "familiarity" and "standardization" cited as economies in Mr. Friedman's argument depend on some other owner's willingness, at some time, to have experimented and perhaps to have aspired. This is precisely one of the many opportunities given to the investment builder by society, and it inevitably implies questions about his responsibility to give as well as to receive.

Investment building, for all the cheese-paring so common in it, is hardly a subsistence enterprise in which every monetary advantage must be seized to make a bare living for those involved in it. It is usually a highly profitable enterprise, though highly competitive, and, therefore, it entails value choices affecting the degree of profitability. It is no different in this respect from most other businesses. The difference, if any, is that the moral choices made by the investment builder are so instantly and unmistakably visible—and so much longer lasting. END

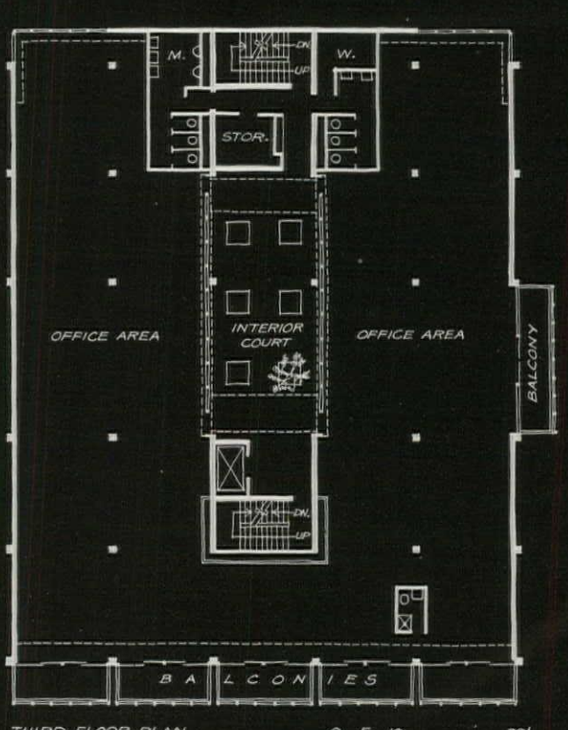
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GROUND FLOOR PLAN

N



THIRD FLOOR PLAN

0 5 10 30'

The low cost of elegance

Craig Ellwood's first multilevel building is a study in fine detail and rare building economy.

The Carson/Roberts advertising agency makes a point of telling its clients that good design is good business. So when the agency decided to build a new headquarters, the building had to be good; to settle for less than first-rate design would be distinctly embarrassing.

Through its own efforts, and those of a talented designer, the agency got a building that, according to one executive, "works for us every minute." And for an air-conditioned building of such elegance, the price was very low: $400,000, or about $14.50 per square foot.

Carson/Roberts reasoned that good design implies a good client, and that a good client must do three things: pick a top designer, outline its needs for him in detail, and provide a clear channel of communications. The agency chose Craig Ellwood as its designer, primarily because of its admiration for his elegantly framed and crisply detailed houses.

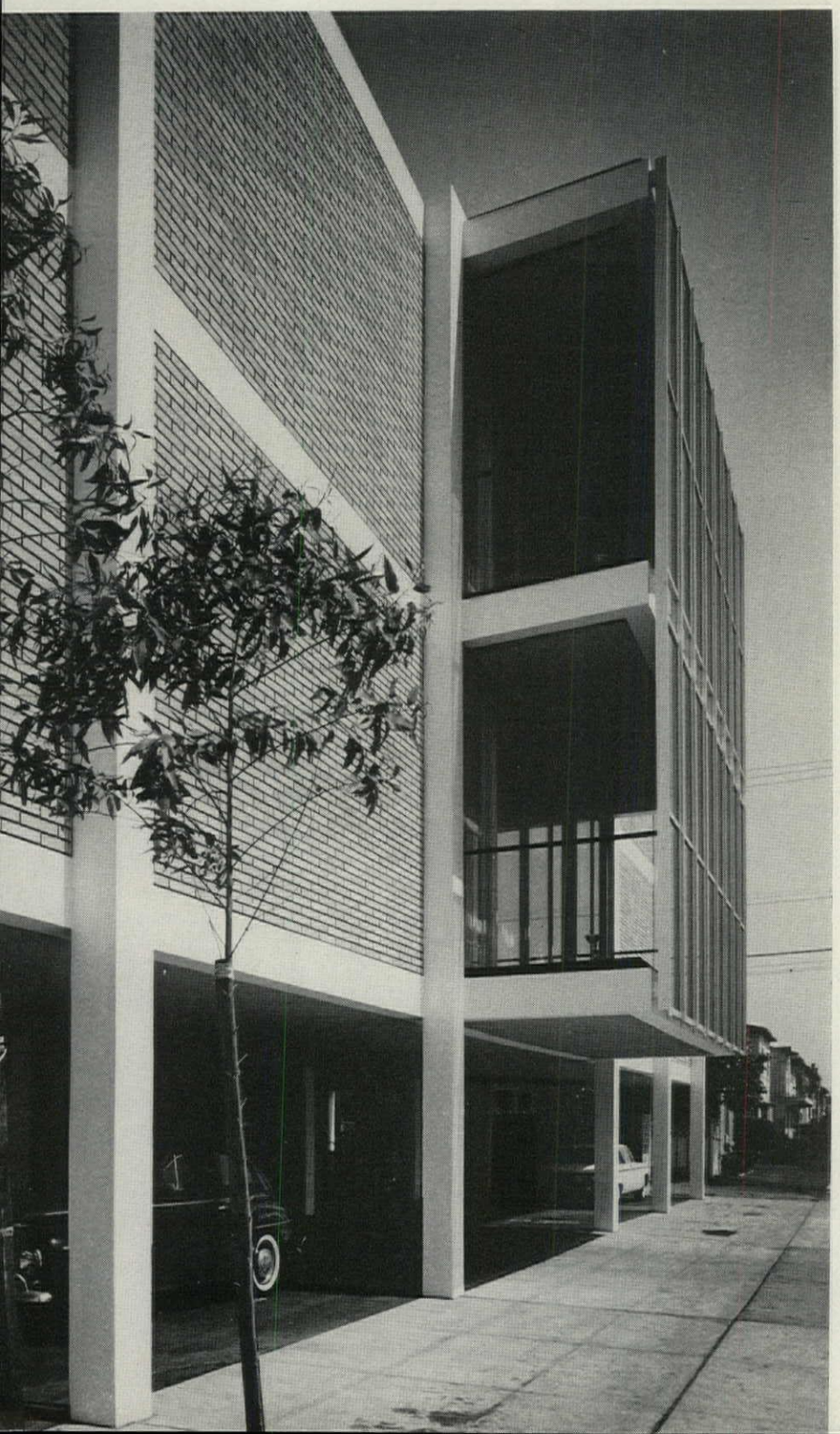
The resulting building (opposite) occupies a corner lot, 104 feet wide by 110 feet deep, bounded by streets or alleys on the north, west, and south, and by an existing building on the east. The structure itself is set well back from property lines on both street fronts. A 10-foot, tree-shaded walk was left between the building and its only immediate neighbor.

Parking facilities could be provided more economically at ground level than in an underground garage, so the building was raised on stilts. Code requirements for two-abreast parking dictated a column clearance of 16 feet in east-west bays, and the middle tier of north-south bays was enlarged to provide the 24-foot clearance specified for auto ingress and exit. Except for the main entrance, stairway and elevator shaft at the front of the building, and a utility core at the back, the ground floor is unenclosed.

Rising above the autos are two floors for people. Carson/Roberts occupies the third floor and part of the second, the remainder of



PHOTOS: MARVIN RAND

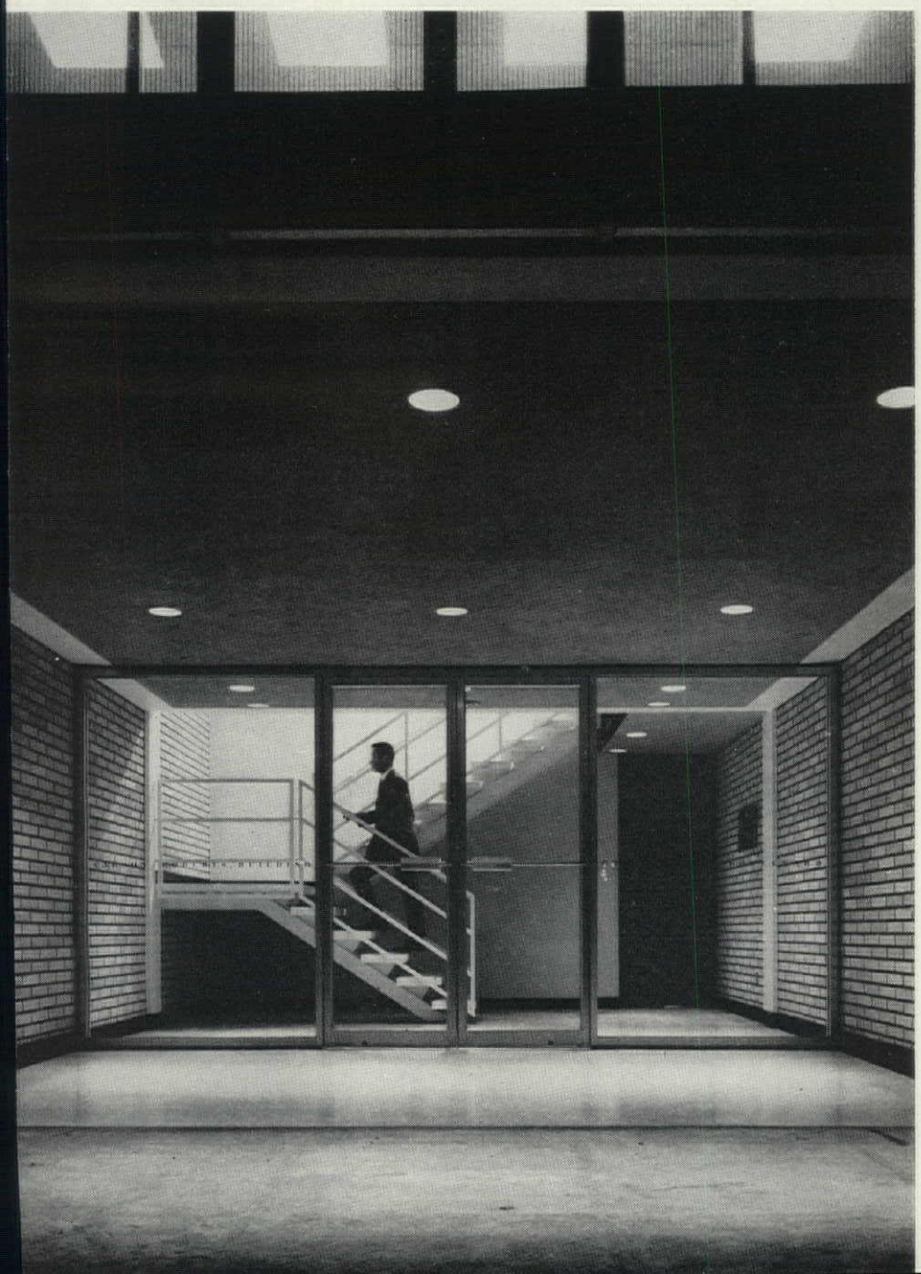


which is rented. One item requested by the client was an interior court. Carved out of the top floor, the court admits a view of tangerine trees and sky through sliding glass doors. Offices and conference rooms face the court (opposite page).

Another client request was for balconies, which Ellwood made one of the building's most distinctive features. Balconies are cantilevered 6 feet out from sliding glass doors that enclose offices on the main, northern façade. Rather than make these balconies continuous across the full width of the façade—which would have cut across and concealed the structural columns—Ellwood decided to cantilever independent decks from each of the five bays (see photo and detail, page 103). His determination to reveal structure made the structure a little more complex, but there is this compensation: the deep recesses syncopate what would otherwise have been a strictly metronomic composition. Custom-designed sun screens of gray-tinted plastic between two sheets of glass hang from the balcony decks, for Los Angeles' summer sun strikes the northern exposure morning and evening. Privacy was a factor, too; Beverly Boulevard to the north is a busy artery.

The steel framing is encased in fire-protective concrete, which in turn is painted white. Clearly differentiated from wall panels of beige brick set in a darker mortar, vertical and horizontal structural members are also differentiated from each other: beams lie within the plane of exterior walls, while columns stand outside. Ellwood's clear expression of structure versus enclosure, his elegant framing, clean detailing, and use of stock components underline his conviction that on-site cutting and fitting of natural materials is an unnatural way of building today. Although many would agree, designers who hew to the line as consistently as Ellwood are rare.

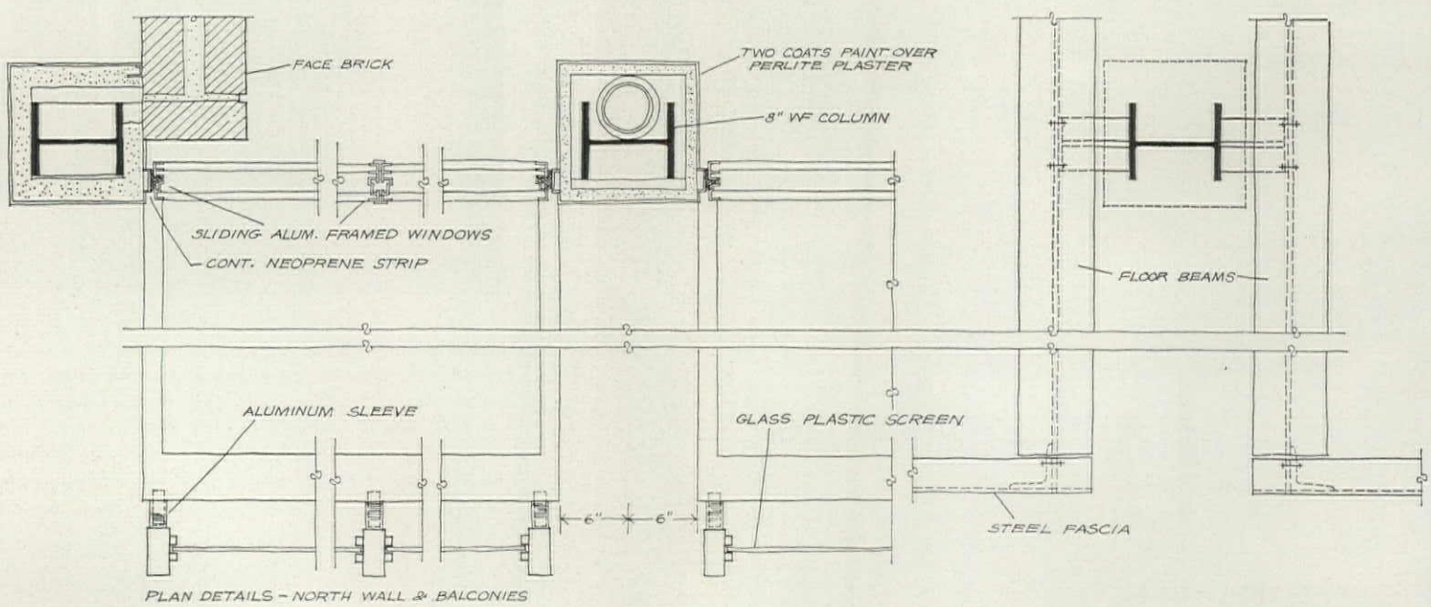




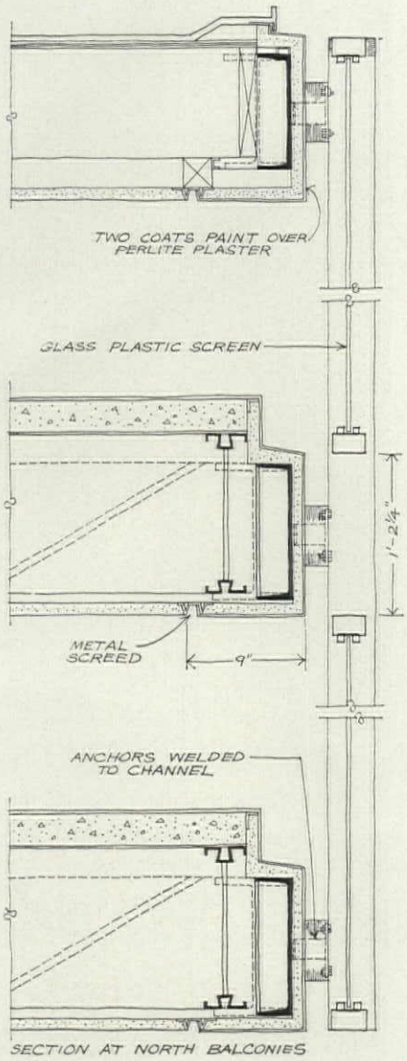


Balcony–sun screens *across full width of northern façade are repeated in one bay of western façade (opposite page). Interior court (photos above) is 18 by 44 feet, has a canopy-protected outdoor corridor at each end. Street entrance (left) reveals neatly detailed stairs; door at right leads to an elevator lobby, which is also accessible from the parking area beyond.*





PLAN DETAILS – NORTH WALL & BALCONIES



Worm's-eye-view *construction photo (right) shows how paired beams transmit load of cantilevered balcony decks to column between them. Structural details are shown in plan (left) and in section (above). Discontinuity of balconies is emphasized (opposite page) by white horizontal band of middle deck, revealed between upper and lower sun screens.*

CARSON/ROBERTS BUILDING, *Los Angeles.* DESIGNER: *Craig Ellwood.* ASSOCIATE: *Gerrald E. Lomax.* CONSULTING ARCHITECT: *Norman Rosen.* INTERIORS: *Craig Ellwood Associates.* LANDSCAPE ARCHITECT: *Warren Waltz.* STRUCTURAL ENGINEER: *Robert Marks.* MECHANICAL & ELECTRICAL ENGINEERS: *Ralph E. Phillips, Inc.* GENERAL CONTRACTOR: *Chotiner & Gumbiner.*

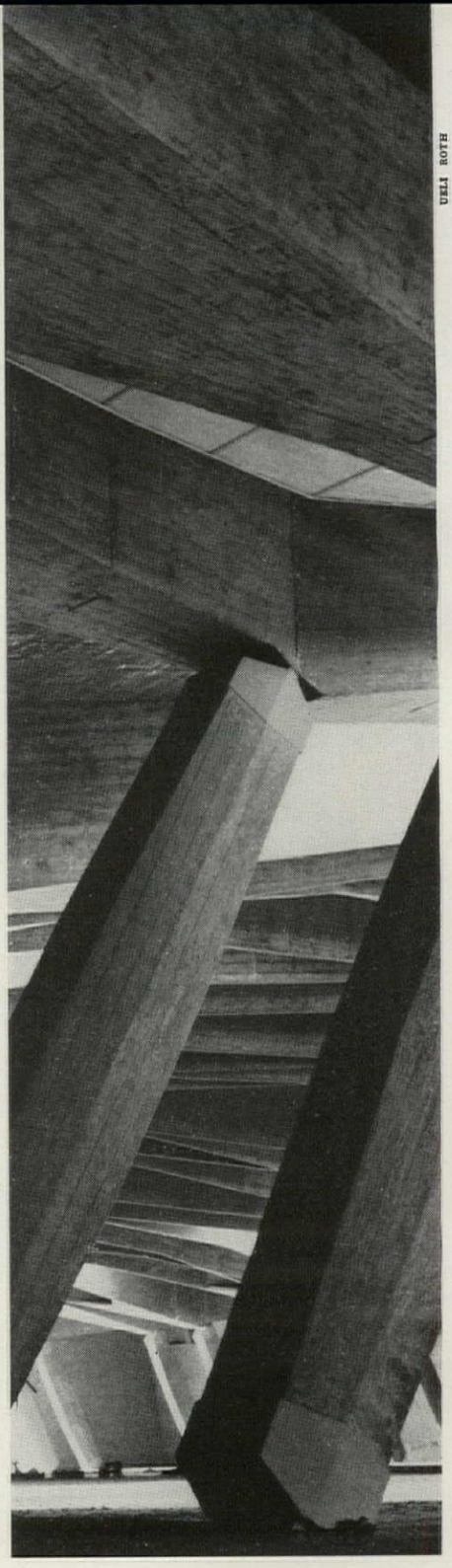
Four great pours

Here is one material—reinforced concrete—used to create four entirely different structural systems: a stand of gigantic columns, a huge, ribbed beam, a tension roof hung from pylons, and a matched set of vaults. The first two are enormous exhibition halls, the third is a great new airport terminal building, the last, a factory warehouse. The concrete may show its potential muscle or it may serve more to enclose the steel, but all have power, sweep, and scale enough to delight an imperial Roman.

The exhibition halls are by modern Romans, Nervi and Morandi; the airport terminal is by the U.S.'s Eero Saarinen; the warehouse is by Mexico's Felix Candela. The technological significance is easy to see: the return of concrete as the confident spanner of great spaces.

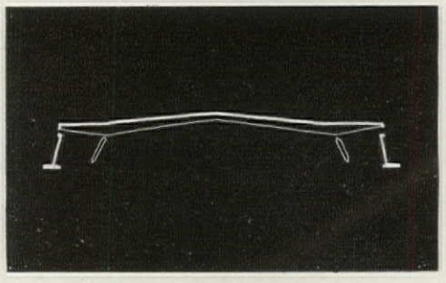
In the U.S. the steel mills still dominate big building, in the current financial equation; but even here concrete has recently become a much hotter competitor. No longer is its surface left exposed with embarrassment. American architects, possibly influenced by what they have seen abroad, are beginning to convince clients of the possibilities of concrete. With theory advancing to help them, engineers are more willing to tackle unique problems; contractors are learning the tricks of formwork. Nevertheless, the steel men are not without consolation, for the resulting concrete buildings often have almost as much load-bearing steel inside the concrete as more admittedly steel buildings have.

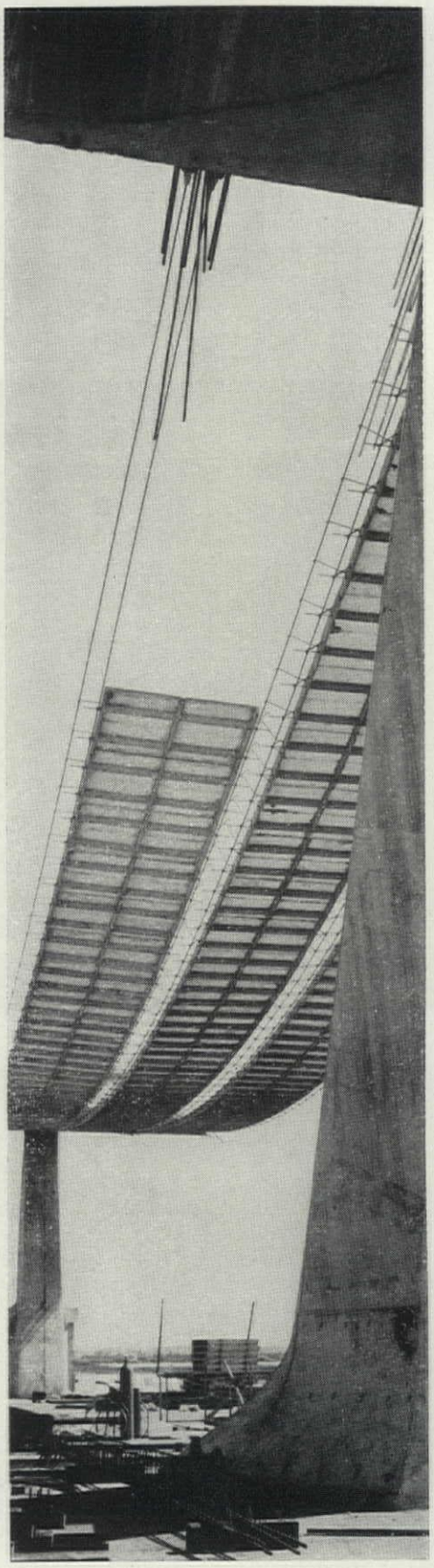
All four of these buildings exploit modern building technique and technology, although anything but modern production-line design. But there is an even sharper architectural significance. With concrete's rebirth, shape has returned to structure.



ULLI ROTH

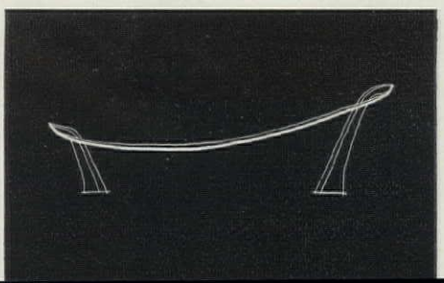
Morandi. *An Italian engineer, whose international reputation is just beginning to soar, builds an immense automobile exhibition hall in Turin (page 106).*

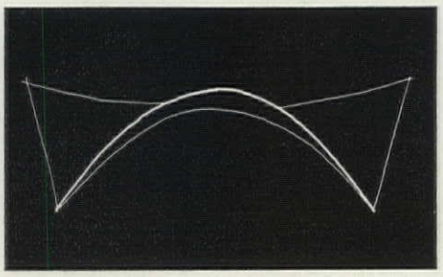




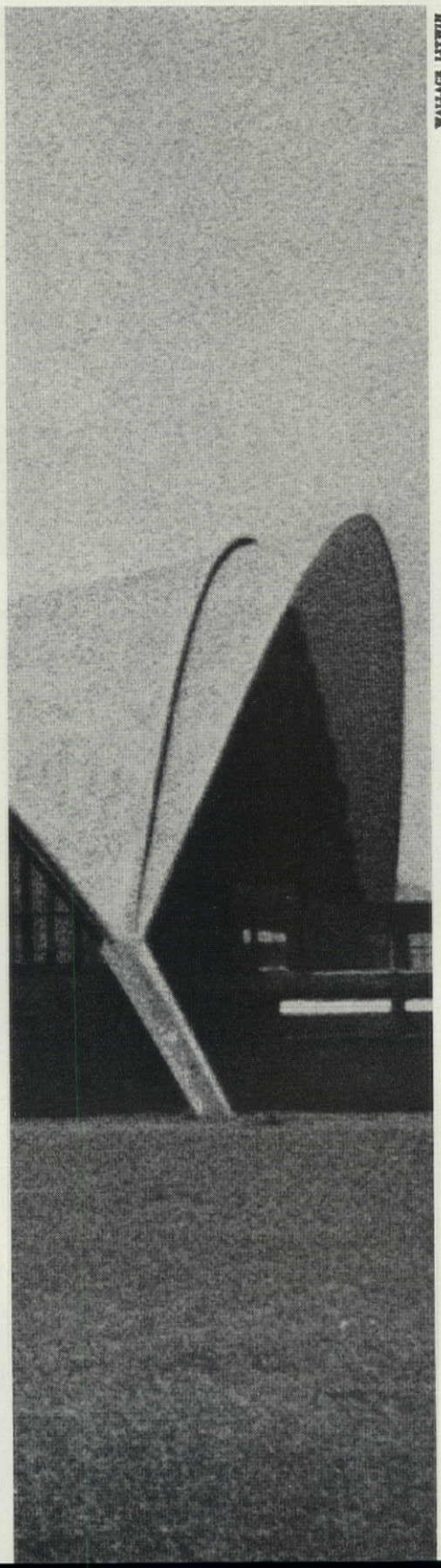
DAN PAGE

Saarinen. *With Engineers Ammann & Whitney, this U.S. architect slings a suspension roof over the terminal for a jet airport near Washington, D.C. (page 111).*

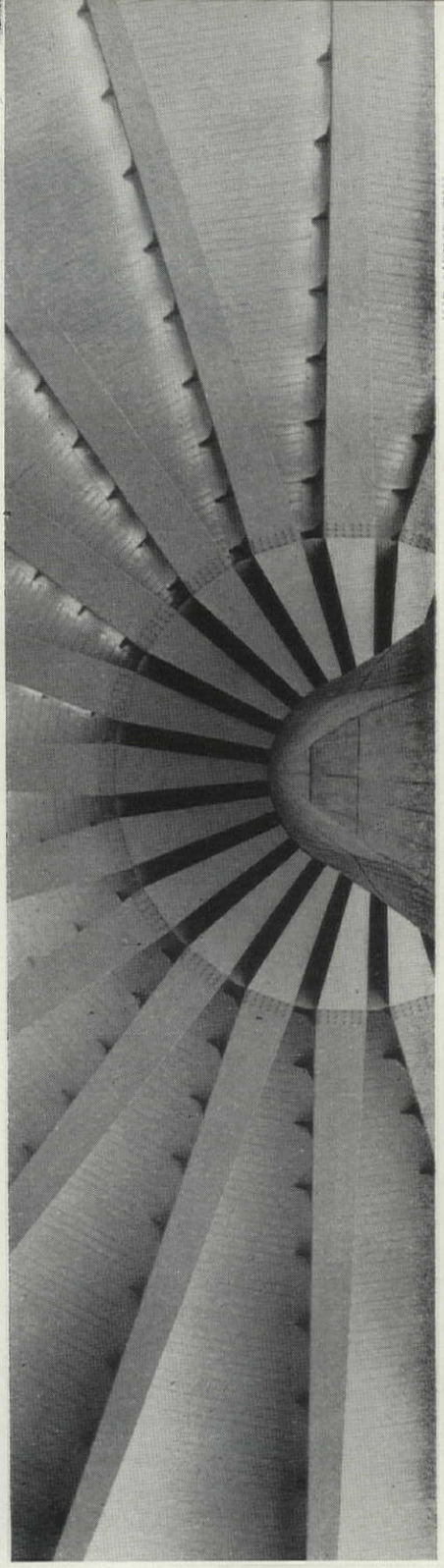




Candela. *In Mexico City the shrewd artist of thin-shell engineering designs and builds a rum warehouse for Bacardi de México, S.A. (page 108).*

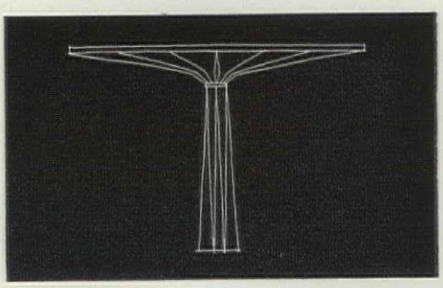


WALTER ENTENZA



ALEX LANGLEY—TIME

Nervi. *This prize-winning exhibition basilica in Turin is now complete, built immaculately as always by Nervi's own construction company (page 114).*



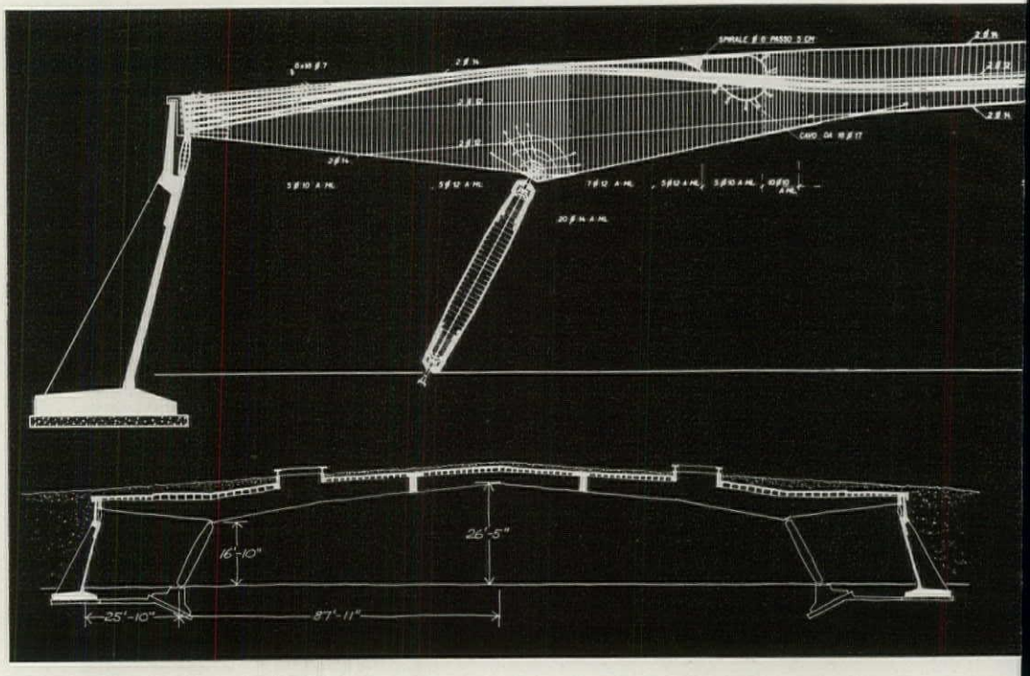
Morandi

Engineer Riccardo Morandi's pavilion for Turin's Annual Automobile Exhibition is directly across the street from Nervi's early postwar halls for the same purpose. But where the world-celebrated Nervi insists that form must develop inevitably from the material and methods chosen, the lesser-known Morandi states flatly he is a designer in structure—and proves it here in a way that is anything but flat.

Morandi's career of calculating loads and expressing stresses dates back to 1927, when he graduated from engineering school in Rome. His outstanding works before completion of this immense exhibition hall have been bridges—concrete spans conceived with the same spareness as Maillart's. The exhibition hall shown here is also in essence a bridge.

Sunk into the earth of Turin's *Parco del Valentino,* with only its ends exposed, the hall has a clear span of 176 feet and is almost 500 feet long. In engineering terminology, it is an eight-hinged structure. This is, in reality, much simpler than it sounds. What Morandi has done is place a cast-in-place and post-tensioned roof on top of four parallel rows of supports; a small pair sits atop the retaining walls while a much larger, inner pair does almost all the supporting. As the supports are hinged at both ends to cope with the expansion and contraction due to temperature change, there are then eight rows of hinges (see sectional drawings). To prevent the structure from toppling over, Morandi has notched the ends of the roof over the top of the retaining wall at each side, thus allowing the weight of the earth against the retaining walls to provide the required lateral stability.

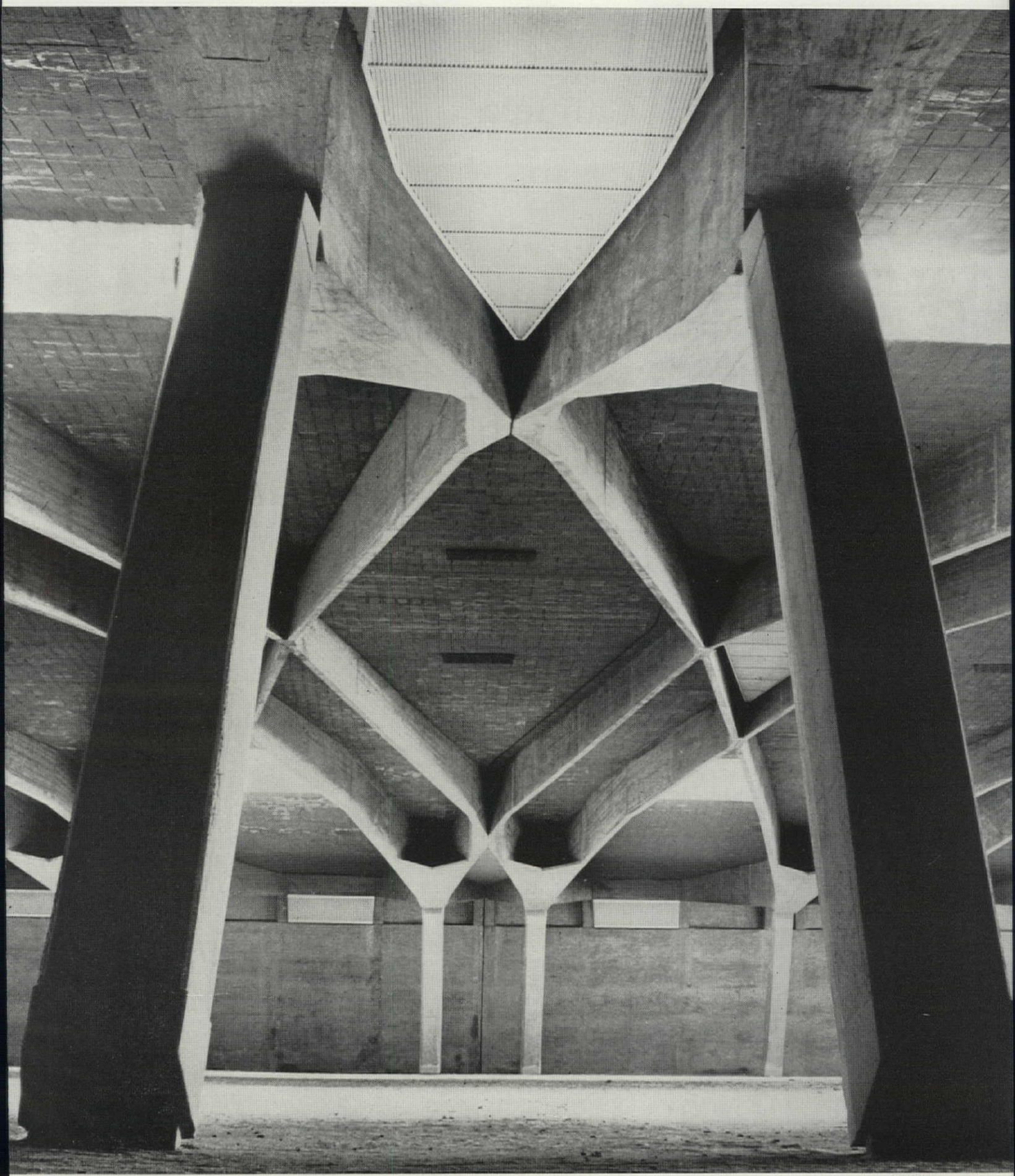
On a true bridge, Morandi might have run his beams straight across, but here he has laced them diagonally to gain lateral stability. As a result they are proportioned as leanly as knife blades with their bottom edges only about 5 inches wide. Large skylights divide the ceiling into bright and dim bays and shadow the elegant beams effectively at the same time. The building has been likened to the Gothic in effect; it has also been traced back to the famous Palace of Machines by Dutert and Contamin at the 1889 Paris Exhibition.



ARCA



Morandi's hall *is used as a skating rink, when not filled with gleaming* **Ferraris, Fiats,** *and Alfas. Right: view out from under the inner columns and across. Above: looking down the long way.*



UELI ROTH

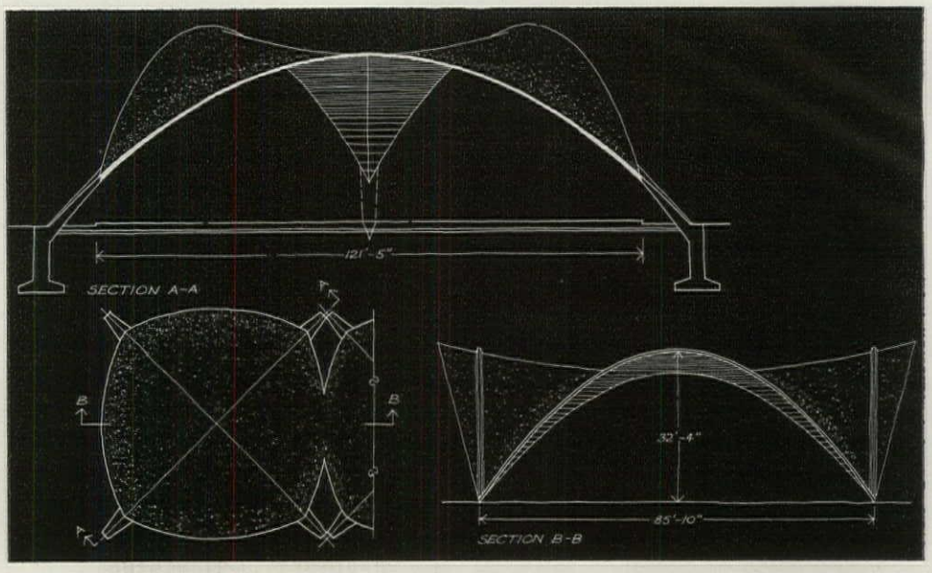
Candela

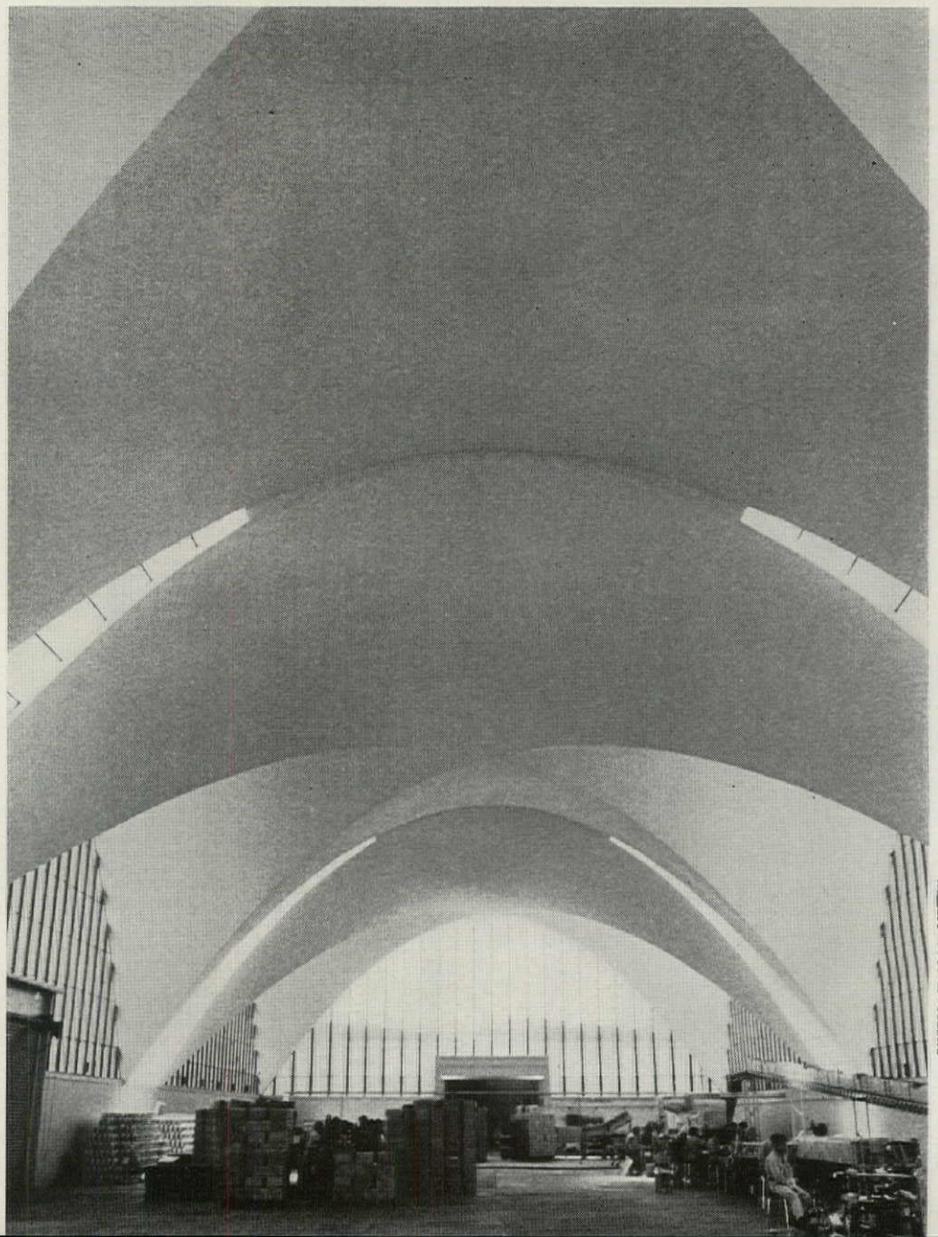
With Felix Candela *as medium, an ancient system is interpreted by modern mathematics. Drawings and photographs show hyperbolic paraboloids and parabolic curves, viewed from the inside and outside.*

Architect - Engineer - Contractor Felix Candela has recently completed the first third of a new warehouse in Mexico City for the Bacardi Rum people. (A less Latin and better known neighbor is Mies van der Rohe's adjacent administration building for the same client.) The warehouse is currently in use as a bottling plant, but it is easily capable of containing the massive distillation equipment itself. Two identical rows of three vaults each are to stand beside those seen here. When they are completed, one side wall of the present row will be removed and a great hall nearly 300 feet square will result.

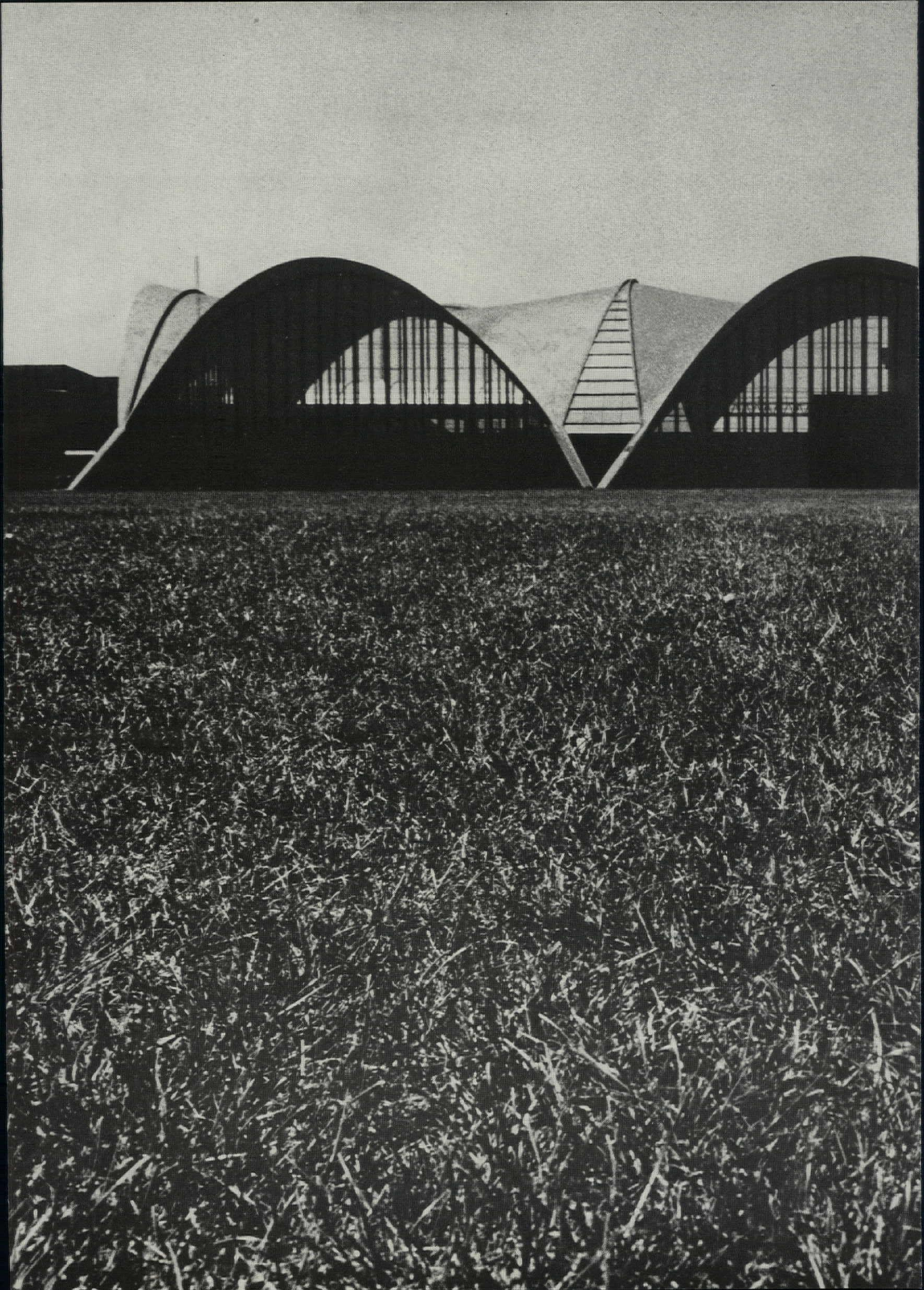
As Candela is the first to point out, the structure is in reality a contemporary version of one of the oldest known spanning systems: the groin vault. The Romans formed theirs by intersecting a pair of barrel vaults; Candela substitutes instead two hyperbolic paraboloids per unit. The result is, of course, double-curved surfaces in place of single-curved ones, but double-curved surfaces whose formwork can be constructed entirely of straight pieces of wood. The vaults frame over a square surface about 86 feet to a side. Loads are transmitted through the parabolic-sectioned groins and into the four buttressed legs upon which each unit rests. Diagonal underground ties between legs absorb outward thrusts leaving the foundation piers only vertical loads to carry. Since each unit is an independent structure, the resulting voids between units can become nonbearing walls of glass or skylights as the case may be.

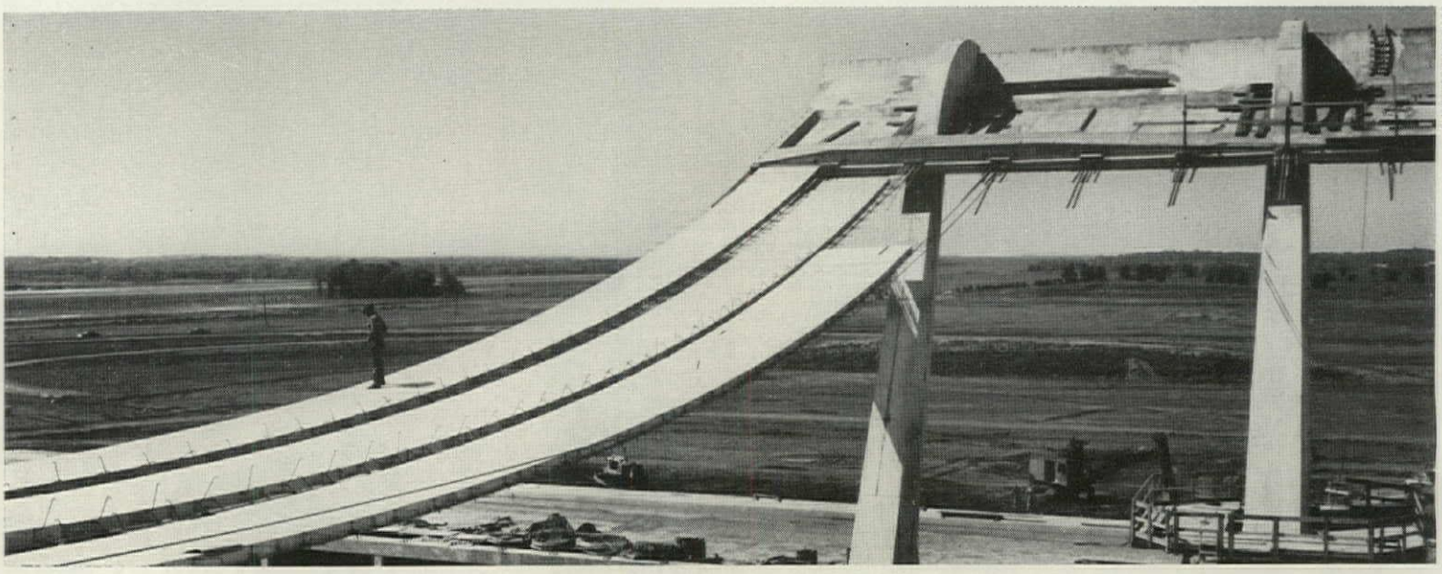
The vaults are subjected only to membrane stresses, in which there is no bending, only pure, uniformly distributed tension or compression. Although Candela maintains the stresses are so low that, in theory, it is possible to eliminate the reinforcing steel altogether, he placed a ⅜-inch steel mesh to aid construction and to prevent cracking from temperature change. As a result, the thickness of the shells can be the bare workable minimum—in this case, an astonishing 1½ inches. Since there are no forces to resist at the free edges, these are without reinforcing ribs. Waterproofing is accomplished by means of a gold polyester paint. The interior is a warm off-white color.



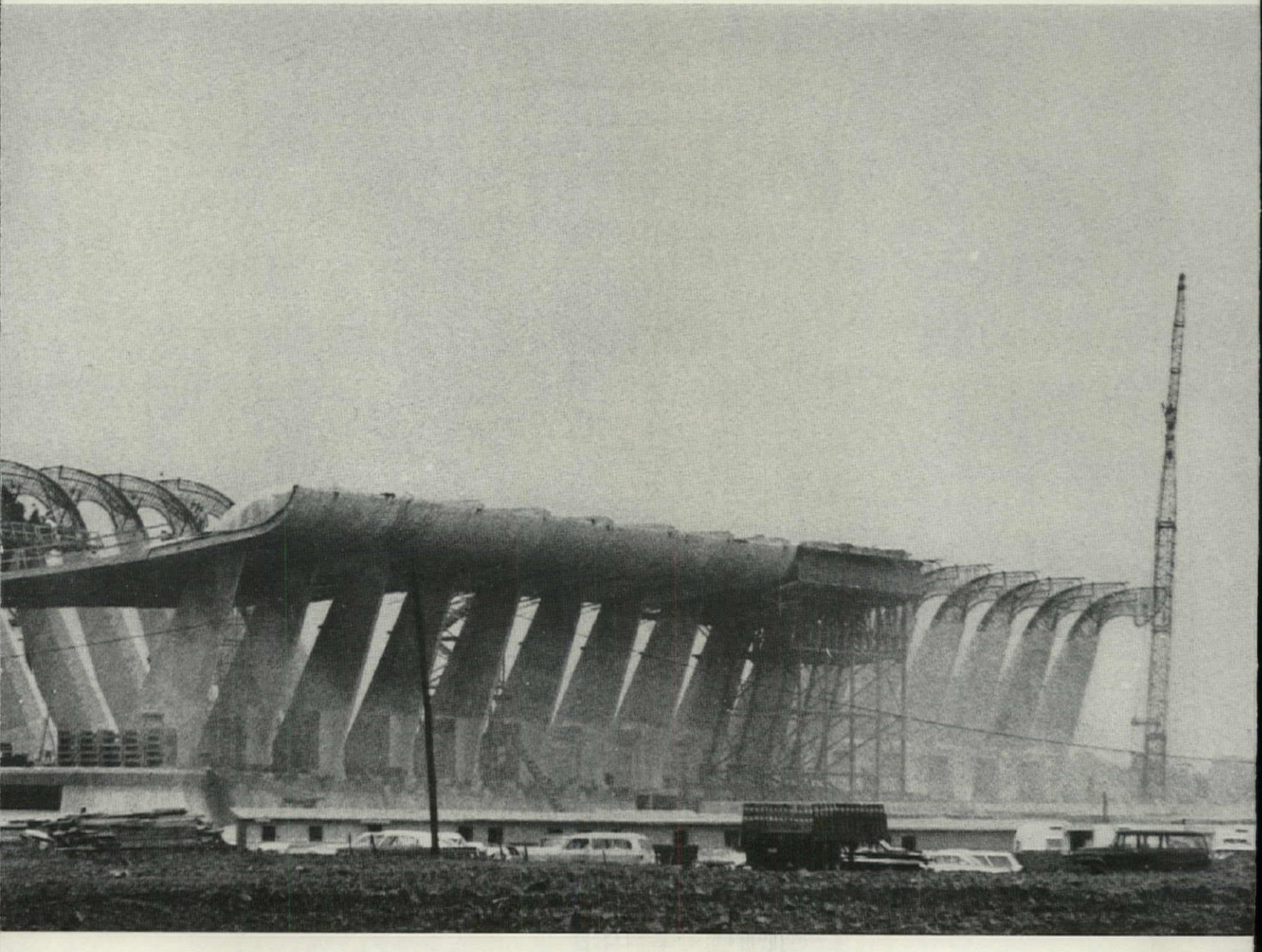


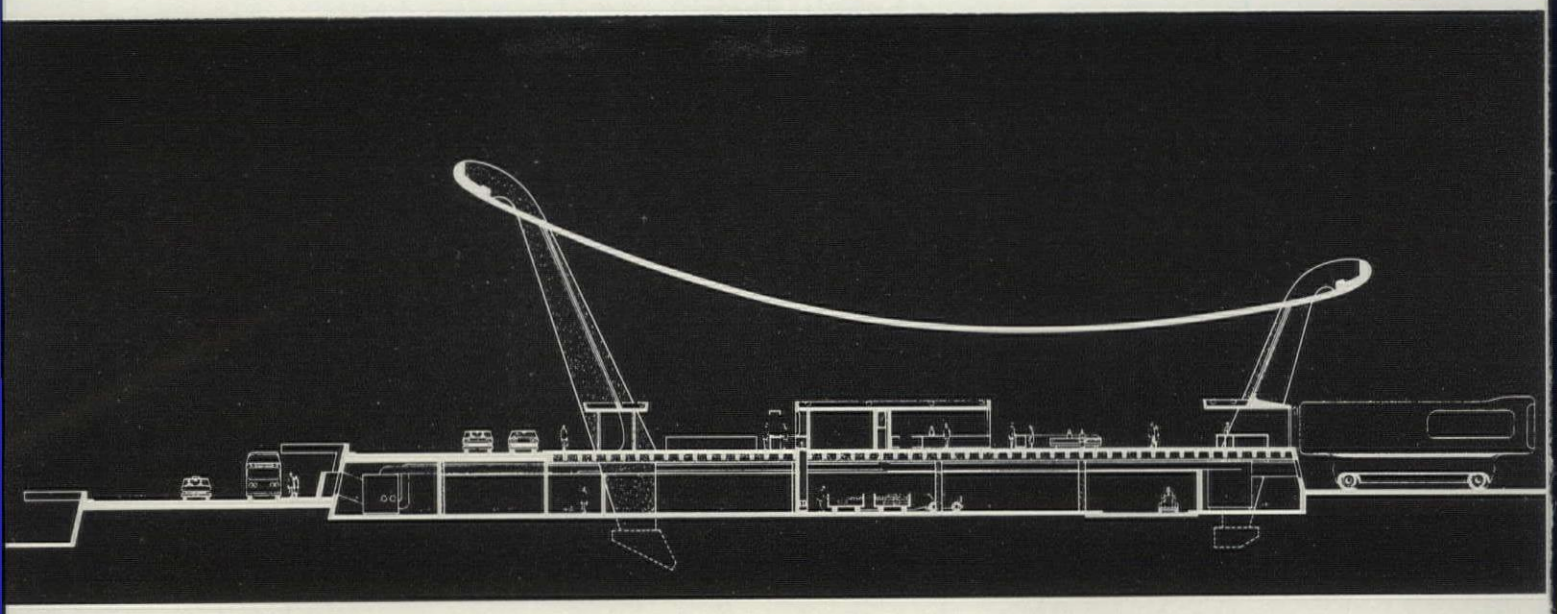
PHOTOS: WALLACE LITWIN

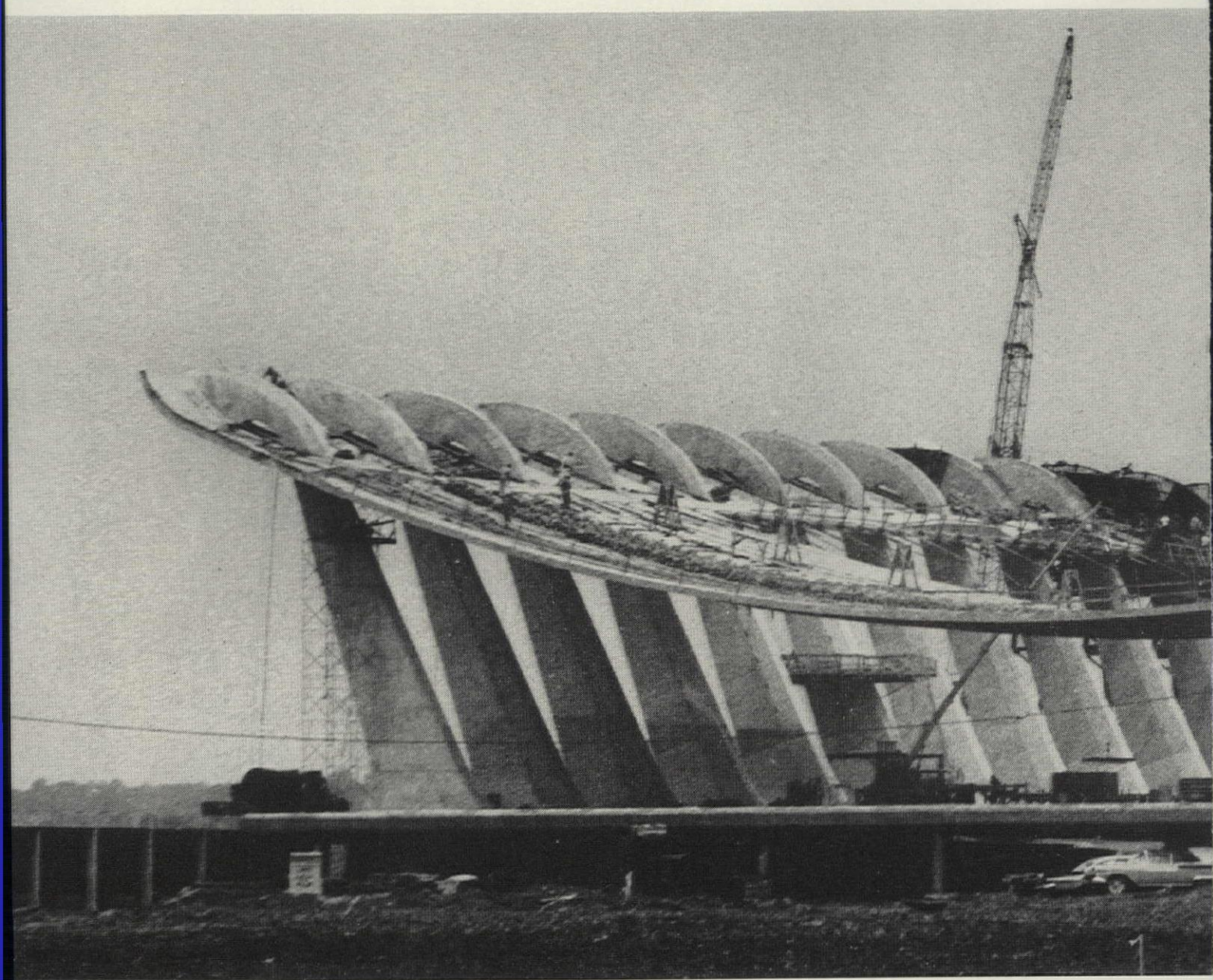


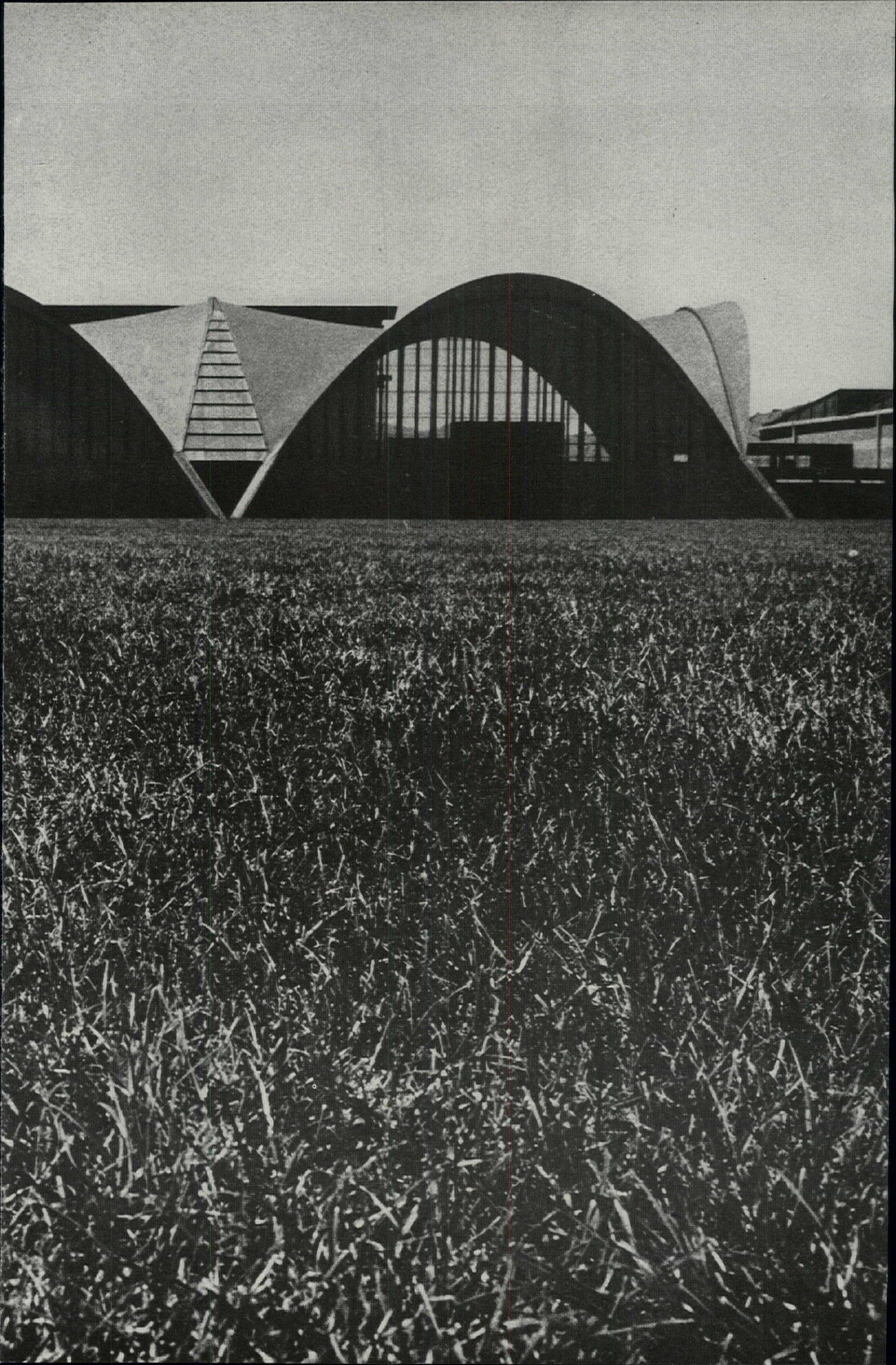


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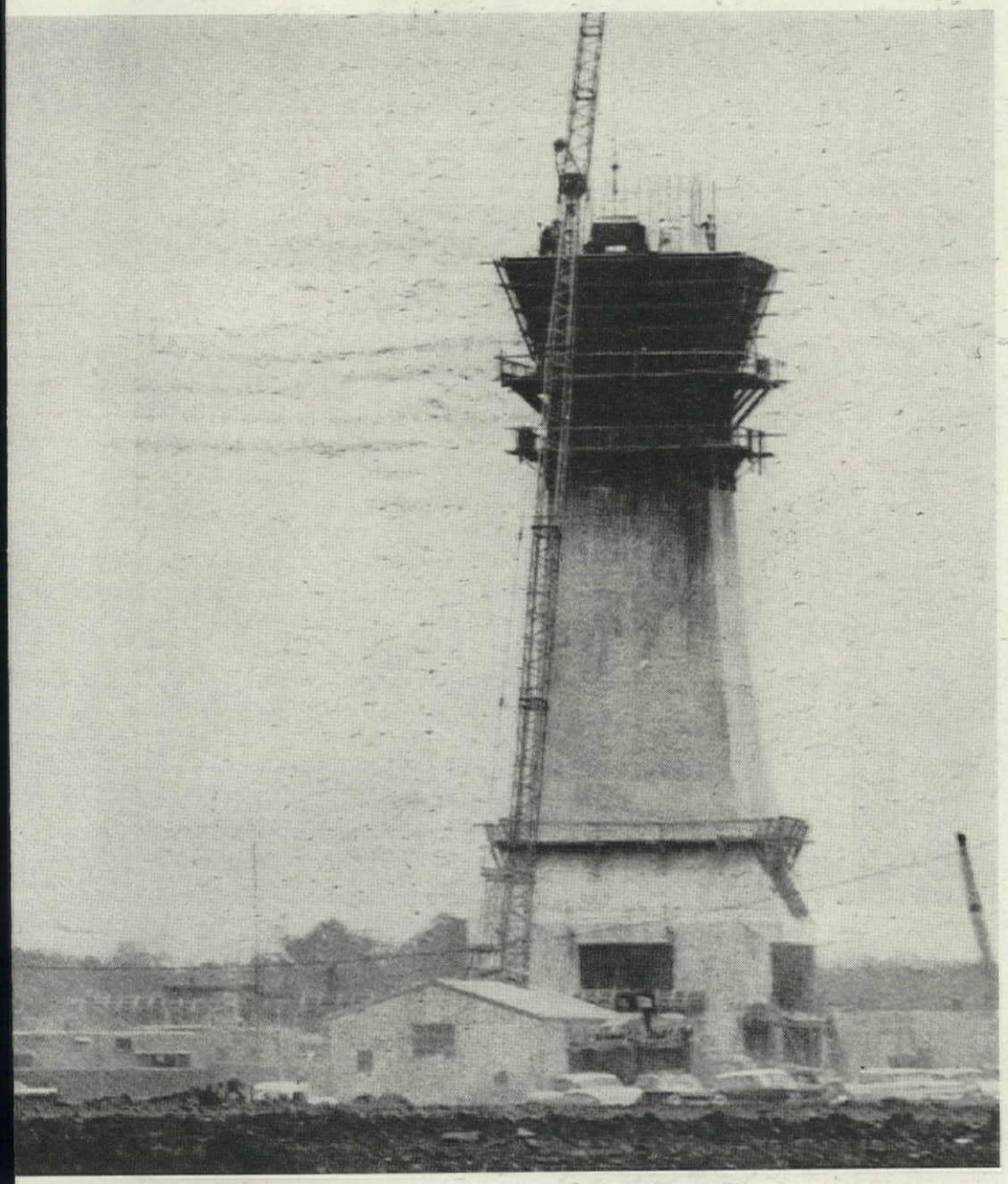






Saarinen

The suspension roof *(left) helps provide the "monumental but nonstatic design" Saarinen envisioned. Emplaning passengers enter mobile lounges on the lower side of the terminal. Below, the control tower under construction.*



For the terminal building at the Dulles International Airport, 23 miles west of Washington D.C. at Chantilly, Virginia, Architect Eero Saarinen and Engineers Ammann & Whitney devised one of the biggest hammocks of concrete ever suspended in the sun. Now it is almost constructed. The roof deck is in place, riding steel cables slung between two rows of immense leaning pylons which will define the terminal's long sides. When these photographs were taken recently, stiffening ribs were being poured with sandbags stacked to stress the cables to the proper curve. (In his earlier tension-roofed building, the Yale Hockey Rink, Saarinen used a different system. There, a flexible roof was stretched between a central arch and the walls on either side. See FORUM, Dec. '58.)

A roof slung like a suspension bridge is not a new idea; the Bedouins were doing it in the desert centuries ago with canvas. But today's buildings and building codes demand starch in the canvas, and this is the reason for the stiffening ribs. For if the wind sweeping over the curved plane at Dulles developed sufficient lift to flap the roof, the motion could destroy the structure, to say nothing of its designers.

The pouring of the stiffeners is a combination of complex computations and sweat. When one rib is completed, the crews heft the heavy sandbags over two stations being formed for pouring, and put them into place at the third. Before the concrete work is called complete the immense edge beam will be test-loaded—and that will mean a lot more sandbagging.

Everything at Dulles is conceived on a massive scale. The plot is 9,800 acres; total cost will be $175 million, without hangars. The terminal's pylons are 65 feet tall on the higher side of the terminal, 40 feet on the lower. Each of the 16 larger pylons has 20 tons of steel reinforcing rods in it. (A workman with a vibrator had to be put *inside* the metal cage of reinforcing when the pour of each commenced.) The terminal site is surrounded by completed runways and acres of neatly trimmed grass. Work is progressing fast, and the Federal Aviation Agency believes the first plane and passenger will meet here about May 1962. When opened, it will be—in terms of acreage—the country's largest airport. Temporarily.

Nervi

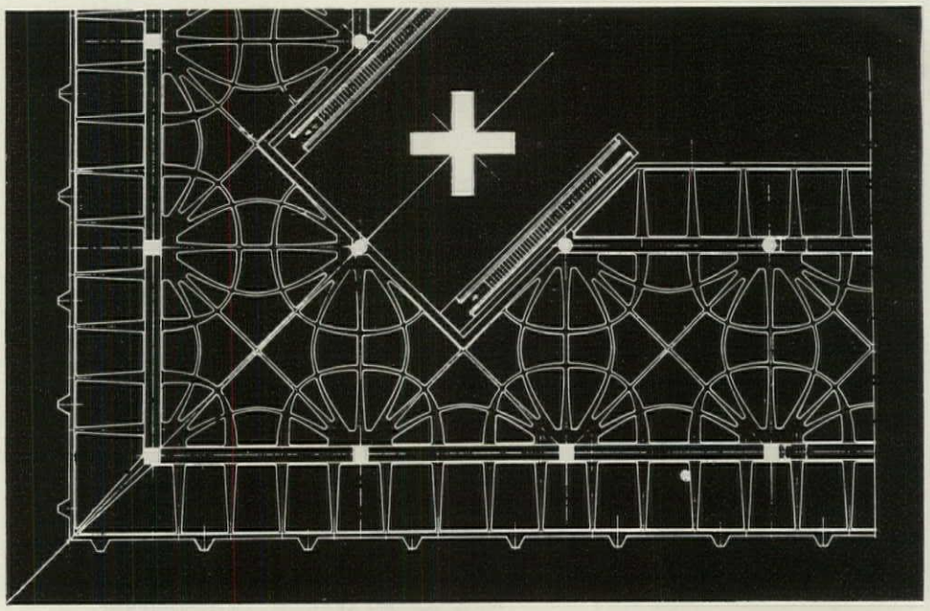
Of all the sights at this summer's celebration of Italy's century of unification in Turin, none is more imposing than the gigantic basilica produced by Pier Luigi Nervi to house the International Labor Exposition. It could hardly be otherwise, for this mute box some 525 feet square and 90 feet high covers an area greater than Saint Peter's and contains a space to inspire a Piranesi.

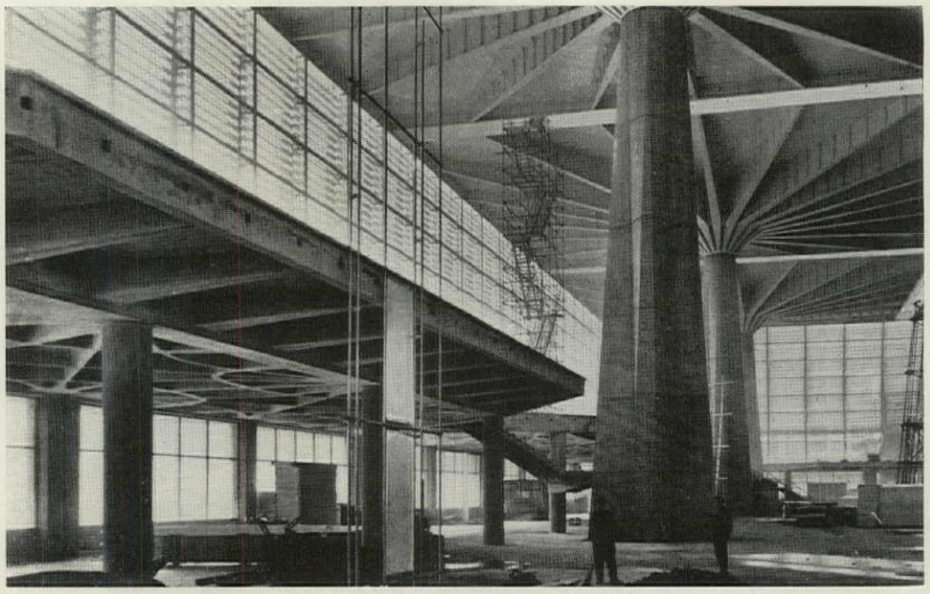
As winner of the competition held for this building (FORUM, May '60), Nervi here faced the largest enclosed structure in his career of large structures: a building to be erected in 17 months—including two winters—and one to be capable of conversion into an industrial school after its days of glory. He, therefore, rejected his usual soaring spans and precast units and chose instead a structural concept of monumental simplicity and great ease of erection. It consists of 16 entirely independent cruciform concrete columns, each tapering from 18 to 9 feet in an 82-foot run, and capped with prefabricated steel umbrellas. (Steel was chosen for speed of fabrication. Nervi maintains that, time aside, concrete would have been just as suitable.) A separate post and ribbed-slab balcony skirts the periphery. With actual erection times running eight days for each column and another 12 days to add the umbrella, the construction process was almost architectural sleight of hand. Son Antonio and Gino Covre (for the steelwork) were associated.

At least until October of this year, the interior is cut into 39-foot-high chunks of exhibition space by Pirelli Building Architect Gio Ponti. It can be argued that this arrangement adds scale to the proceedings by allowing only a few columns to be glimpsed at a time, but it does, in the process, obscure any over-all view of Mr. Nervi's magnificent conception.

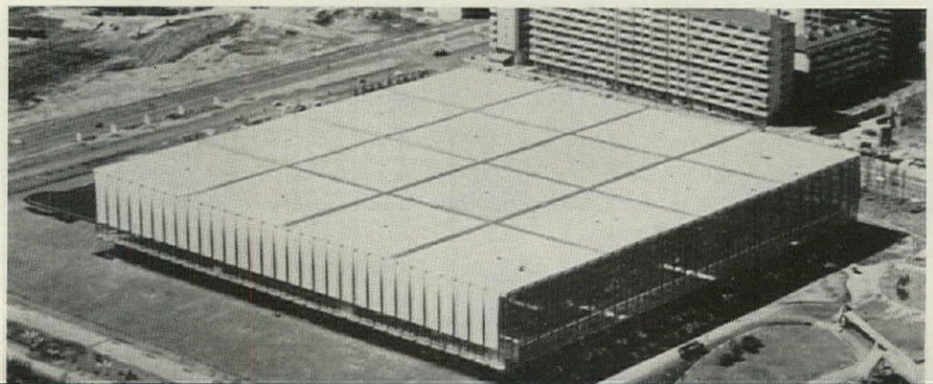
Since Nervi's new palazzo contains a large part of the Centennial's modern exhibit, it is fitting that Guarino Guarini's Palazzo Carignano—where the unification was proclaimed—is the scene of the Historical Exhibit, for Guarini is Nervi's closest Renaissance counterpart. But Guarini's palazzo is also a nontypical work of its designer, so Turin has at least two reminders that the truly creative are beyond classification.

Louvers on three sides *make Nervi's building something of a surprise package. The building concept may be departure, but the balcony structure is standard Nervi. Note size of human figures.*





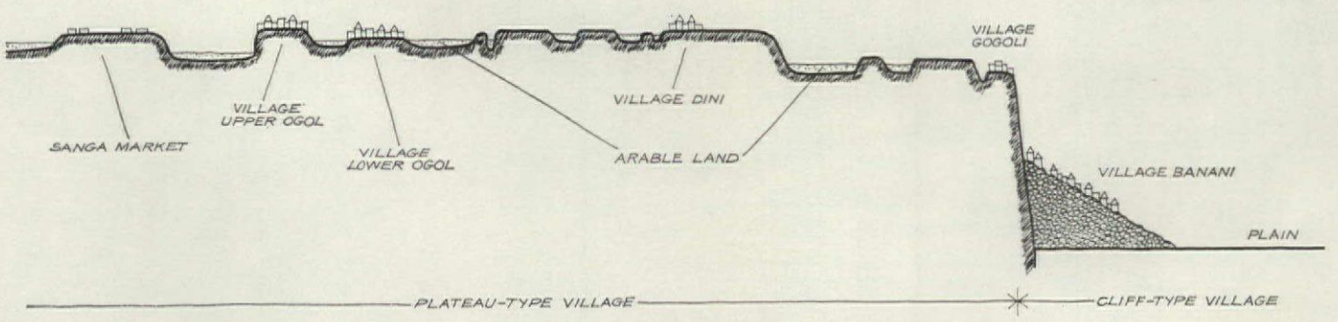
PHOTOS: (ABOVE) MOISIO; (OTHERS) ALEX LANGLEY—TIME



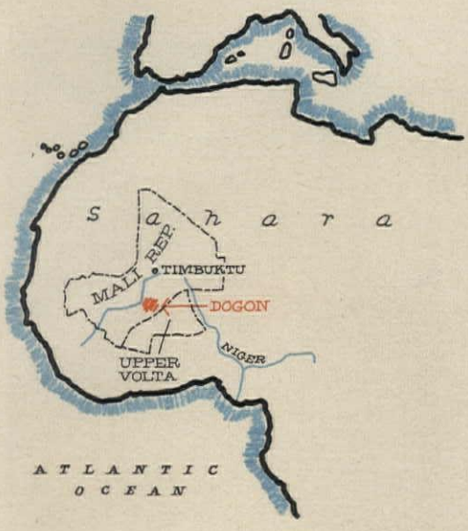


PHOTOGRAPHS BY ALDO VAN EYCK

A Ginna, *of which there are several in each village, is a large house (above) in which a patriarch lives with his wives and unmarried sons and daughters. The niches, containing cult objects, represent the 80 descendants of the primordial ancestors of the Dogon people.*



Architecture of the Dogon



At a long bend of the Niger River in Northeastern Africa, in the rocky band of geography which lies between the parched Sahara and the soggy tropical plains, is one of the most compact complete civilizations of that tenaciously historical continent. It is the land of the Dogon, an area about twice the size of Maryland, dotted with small villages which sit like stage sets on small hard plateaus or cliffsides with deposits of arable land around them—like cupcakes in a gigantic baking tin. Aldo van Eyck, a Dutch architect, has long been fascinated by the buildings of these villages. The structures are well-designed shields against the severe climate; their groupings are a precise physical parable of the communal organization which characterizes the code of life here; most of all, the forms of the architecture itself are a stirring dramatization of both the tangible and traditional needs. The photographs and captions which appear on these six pages, and the text which follows, are by Architect van Eyck.—ED.

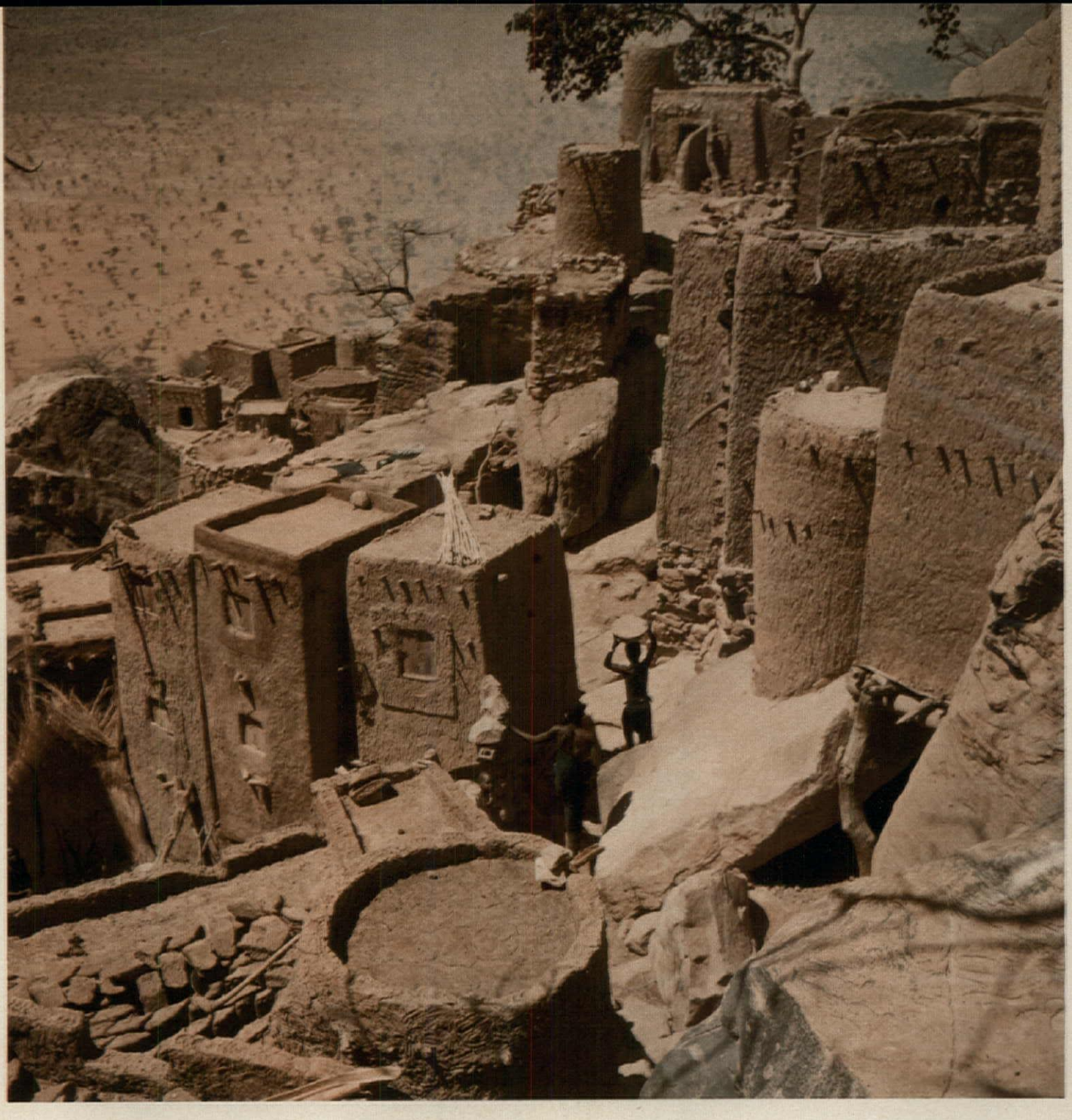
Since Marcel Griaule inaugurated the study of the Dogon in 1930 a vast amount of writing has been dedicated to these remarkable people whose extremely integrated social and religious pattern of life has withstood the onslaught of the modern world in a way quite unprecedented. The spiritual tenacity and integrity of the Dogon have certainly no rival in Africa today.

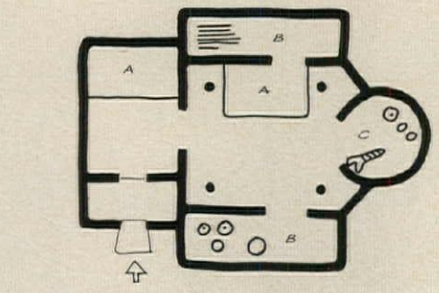
Their territory lies 200 kilometers due south of Timbuktu in the bend of the River Niger. The present population, estimated at approximately 250,000, lives in some 700 small communities spread over an area of 50,000

continued on page 186

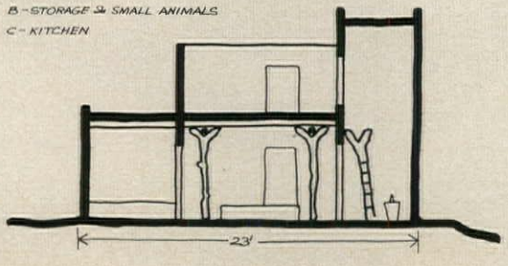
Main village square in Yugo Na, a typical cliff-debris-type village. Note buobab trees and plain in the distance.





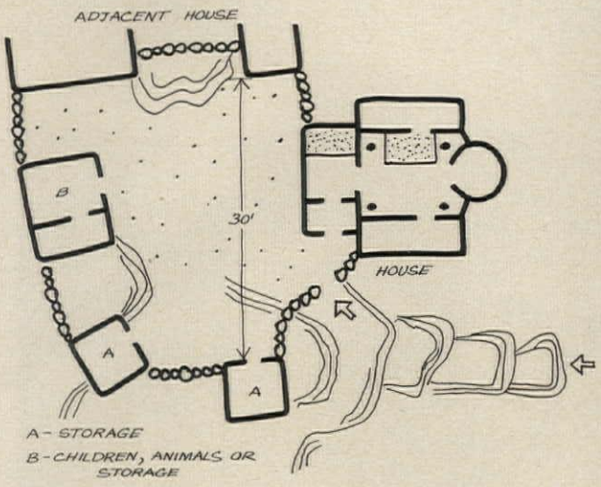


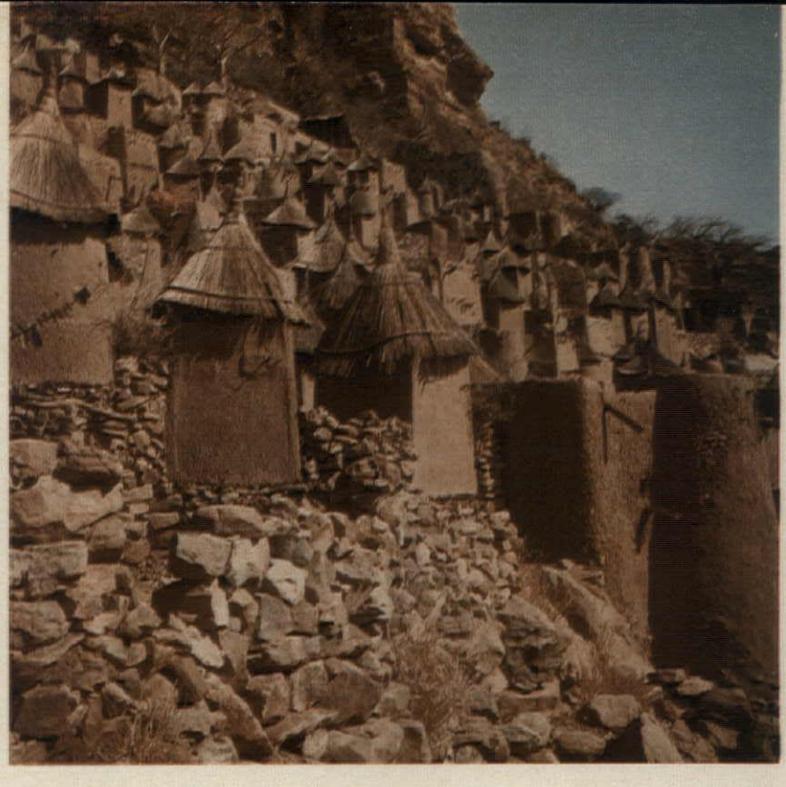
A – RAISED BED
B – STORAGE & SMALL ANIMALS
C – KITCHEN



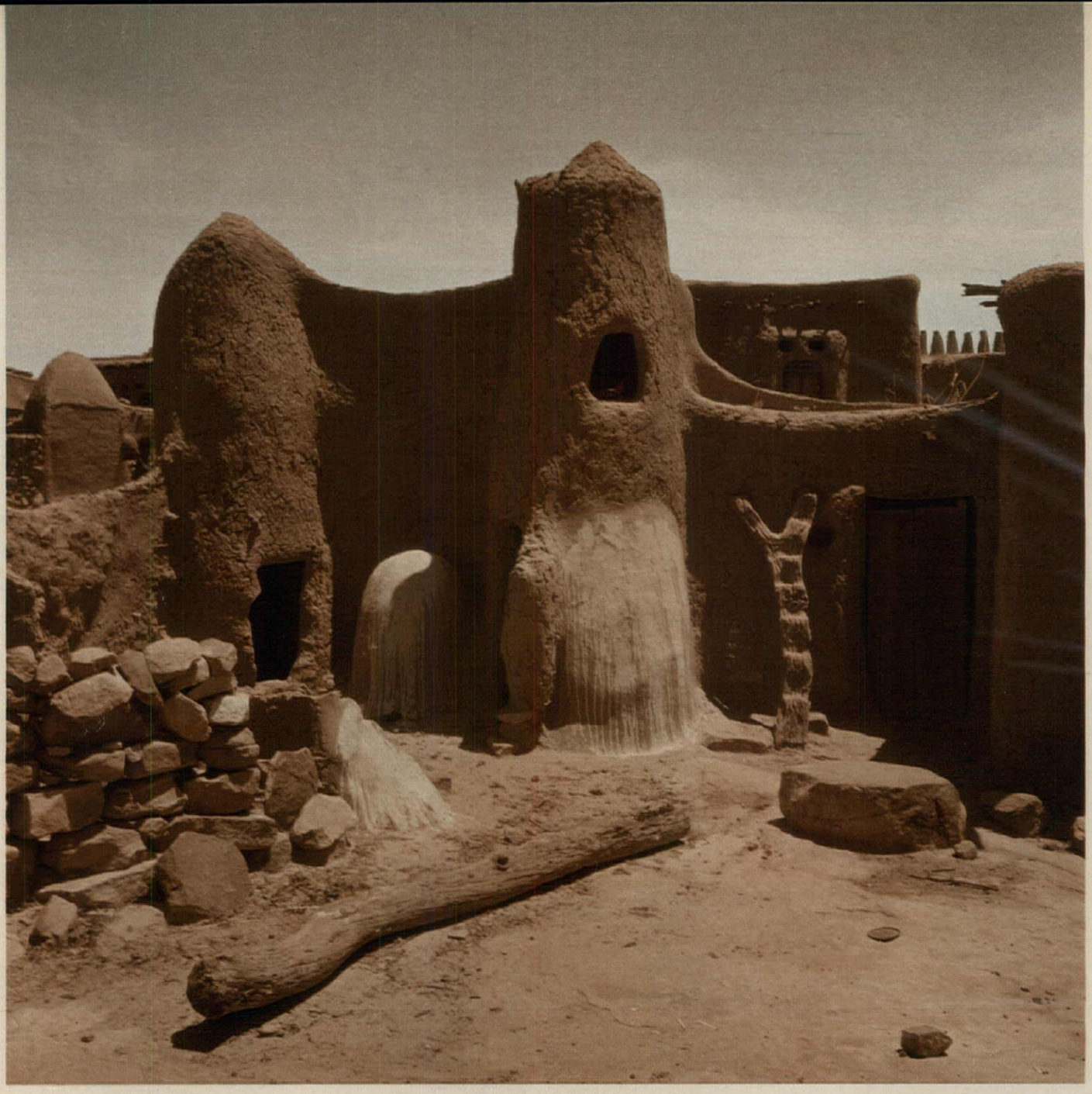
Yugo Doguru, another cliff-debris-type village, is the "Mecca" of the Dogon people, for here the grave of the "first" Dogon lies. It is the privilege of the male elders of Yugo Doguru to order the advent of the Sigi *every 60 years, the great mask celebration which constitutes the symbolic renewal of the entire Dogon people.*

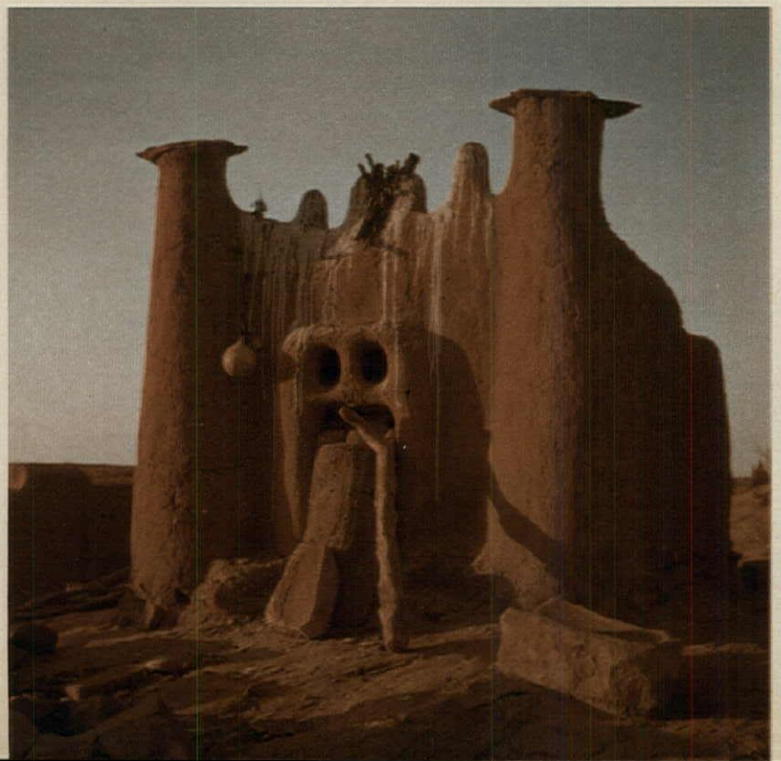
Banani (right, above) is a perfect example of a cliff-debris village. The fallen rocks are much smaller here but the site's inclination—300 feet from top to bottom—is very great. The granaries and houses rest on foundations of stones and branches; the walls are made of sun-dried clay bricks strengthened with bits of straw. At the right: a family yard with granaries in Banani.


ADJACENT HOUSE
B
30'
HOUSE
A
A
A- STORAGE
B- CHILDREN, ANIMALS OR STORAGE









This sanctuary (above) is in the yard of an important village elder in Upper Ogol. Note the recessed dome-shaped altar; different libations are poured over it: a white millet brew, Dolo (indigenous beer), or the blood of sacrificed animals. The communal sanctuary (left) contains sacred objects—hence the barricaded entrance.

The isolated house (right, above) in Lower Ogol is an outstanding example. The symbol on the wall of the ancient granaries in Banani (right) is one of great importance and occurs frequently. It is a Kanaga, the Dogon bird-mask known to all lovers of African art. This totem mask is always surmounted by a kind of large Lorraine cross, symbol of man and creation.





Toward richer city streets

BY JANE JACOBS

During the past two years, the by-line of Jane Jacobs has appeared only rarely in FORUM; *she has been on leave to write a book about cities, on a Rockefeller Foundation grant* (The Death and Life of Great American Cities, *to be published next month by Random House). An occasional peek at fragments of the text convinced* FORUM'S *editors that this would become a most original and important contribution on the subject. A special arrangement was made with the publisher to produce excerpts from two chapters, of which the first follows.*

The chapters preceding this one argue that the life, the viability, indeed the security of the city depend on maintaining a close-packed diversity of people, usages, and buildings all through the city fabric.—ED.

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Streets provide the principal visual scenes in cities. Too many streets present our eyes with a profound and confusing contradiction. In the foreground, they show us all kinds of detail and activity. They make a visual announcement (very useful to us for understanding the complex underlying functional order of cities) that this is an intense life, and that into its composition go many different things, giving each other support. The streets of a city make this announcement to us because on them we may see not only considerable activity, but also different types of buildings, signs, store fronts, and other enterprises or institutions—the inanimate evidences of activity and diversity.

If such a street goes on and on into the distance, with the intensity and intricacy of the foreground apparently dribbling into endless amorphous repetitions of itself and finally petering out into the anonymity of distance, we are also getting a visual announcement that clearly says "endlessness."

In terms of all human experience, these two announcements, one telling of great intensity, the other telling of endlessness, are hard to combine into a sensible whole.

One or the other of these two conflicting sets of impressions has to take precedence. The viewer has to combat or try to suppress the other set of impressions. Either way, it is difficult not to sense confusion and disorder. The more lively and varied the foreground (that is, the better its innate urban order of diversity), the sharper, and therefore the more disturbing, the contradiction of the two announcements can be. If too many streets embody this conflict, if they stamp a district or a whole city with this kind of equivocation, the general effect is bound to be chaotic.

There are, of course, two ways of trying to see such a street. If a person gives the long view precedence, with its connotations of repetition and infinity, then the close-up scene and the intensity it conveys seem superfluous and offensive. I think this is the way that many architecturally trained viewers see city streets, and this is one reason for the impatience, and even contempt, that many (not all) of those who are architecturally trained express for the physical evidences of city diversity, freedom, and life.

If the foreground view, on the other hand, takes precedence, then the endless repetition and continuation into lost, indefinite distances becomes the superfluous, offensive, and senseless element. I think this is the way most of us look at city streets most of the time, because this is the viewpoint of a person whose purpose it is to

use what exists on that street, rather than to look at it in detachment. Looking at the street in this way, the viewer makes sense, and at least a minimum amount of order, out of the intimate view, but only at the price of considering the distance as a deplorable mishmash, better dismissed from mind if possible.

To bring even a chance for visual order to most such streets—and to districts in which such streets predominate—this basic contradiction between strong visual impressions has to be dealt with. I think this is what European visitors are getting at when they remark, as they often do, that the ugliness of our cities is owing to our gridiron street systems.

The functional order of cities demands intensity of life and intricate diversity of use; their evidences can be removed from the street only at the cost of destroying necessary functional order. On the other hand, the order of cities does not demand the impression of endlessness; this impression can be minimized without interfering with functional order. Indeed, by so doing, the really significant attributes of intensity and diversity are visually reinforced.

What is needed on a good many city streets (not all) are *visual interruptions* which cut off the indefinite, distant view and at the same time visually heighten and celebrate intense street use by giving it a hint of enclosure and entity.

Old parts of our cities which have irregular street patterns frequently do this. However, they have the disadvantage of being difficult to understand as street systems; people easily get lost in them and have a difficult time keeping them mapped out in their heads.

Where the basic street pattern is a gridiron plan, there are two main ways of introducing sufficient visual irregularities and interruptions into the city scene.

The first means is by adding more streets where the streets of the gridiron plan are too far apart from each other—as on the West Side of Manhattan, for example; in short, where additional streets are necessary in any case to give a district more fluidity of movement and cross-use.

If such new streets are added economically, with a decent respect for saving the most valuable, the most handsome, or the most various among buildings that lie in their potential paths, and also with the aim of incorporating sides or rears of existing buildings into their frontages, where possible, to give an economic mixture of age among buildings, then these new streets will seldom be straight for any great length. They will have bends in them and sometimes a considerable tangent. Even a straight street, cutting one former large block into two small blocks, will not likely form a continuous straight line with its extensions through the next block and the next and next, indefinitely. There are almost bound to be "T" junctures where these offset street segments meet the intersecting streets at right angles. Ordinary prudence and respect for city variety, combined with an awareness that irregularity in these cases is an advantage in itself, can determine the best of various potential alternative paths for new, extra streets. The least material destruction should be combined with maximum visual gain; these two aims need not be in conflict.

Subsidiary irregularity within a dominant grid system is not difficult to understand. Extra streets like these, introduced in between the grid streets, could even be named in recognition of their relationship to the grid.

The combination of a basic, easily understandable grid system, together with purposely irregular streets dropped in where the grid is too large for good city functioning, could be a distinctive American contribution to the tactics of city design.

Grid breakers

The second means for introducing irregularities and visual interruptions where they are insufficient is on grid streets themselves.

San Francisco is a city with many natural visual interruptions in a gridiron street pattern. San Francisco's streets, in general, are regular gridiron arrangements in two-dimensional plan; however, in the city's three-dimensional topography, they become masterpieces of visual interruption. The many and abrupt hills constantly make separations between the nearby scene and the distance, and this is true whether one is looking along a street toward a rise, or looking down a slope. This arrangement greatly emphasizes the intimate and immediate street scenes, without sacrificing the clarity of gridiron organization.

Cities without such topography cannot reproduce any such happy accident by natural means. But they can introduce visual interruptions into straight and regular street patterns without sacrificing clarity of organization and movement. Bridges that connect two buildings up above a street sometimes do this service; so do buildings which themselves bridge a street. Occasional large buildings (preferably with public significance) can be placed across straight streets at ground level. Grand

Central Terminal in New York City is a well-known example.*

Straight, "endless" streets can be interrupted and the street itself divided around a square or plaza forming the interruption; this square can be occupied by a building. In cases where vehicular traffic can actually be dead-ended on straight streets, small parks could be thrown across from sidewalk to sidewalk; the visual interruption or diversion would be provided here by groves of trees or by small (and, let us hope, cheerful) park structures.

In still other cases, a visual diversion need not extend across a street, but can be in the form of a building or group of buildings set forward from the normal building line to make a jog, with the sidewalk arcaded underneath. Another form of jog is a plaza at one side of the street, which makes the building beyond stand out as a visual interruption.

It might be supposed that all this visual emphasis on intensity of street use would be rather overwhelming or even inhuman. But this is not so. Districts with many visual street interruptions do not, in real life, tend to intimidate or overwhelm people; they are more apt to be characterized as "friendly" and also to be comprehensible as districts. After all, this is intensity of human life which is being acknowledged and emphasized and, what is more, emphasized in its understandable, close-up aspect. It is city infinity and repetition which generally seem overwhelming, inhuman, and incomprehensible.

Beware of pitfalls

There can be pitfalls, however, in dogmatic or thoughtless use of visual street interruptions.

First, there is little point in using them where there is no visual tale of street intensity and detail to clarify. If a city street is, in truth, a long repetition of only one kind of use (such as residence), providing thin activity, then visual interruption does not clarify the existing form of order here. Visual enclosure of nothing (in terms of urban diversity and intensity) can hardly amount to more than a design affectation, purely for the sake of design. Visual interruptions and vistas will not, in themselves, *bring* city vitality and intensity or their accompaniments of street safety, interest, casual public life, and economic opportunity.*

Second, it is unnecessary, and would even become boring in its own way, for all city streets to have visual interruptions. After all, a big city is a big place, and there is nothing wrong in acknowledging or stating this fact from time to time. Another of the advantages of San Francisco's hills, for instance, is that the views from them do precisely this, and they do it at the same time as they are separating the distance from the immediate street view. Occasional endlessness, or else focal endings far in the distance, lend variety. Some streets that run into borders such as bodies of water, campuses, or large sports grounds should be left without visual interruptions. Not every street that terminates in a border need reveal this fact, but some of them should, both to introduce distant glimpses of what is different, and to convey casual messages about the whereabouts of the border.

Third, visual street interruptions should be, in functional terms, not dead ends, but "corners." Actual physical cutoffs—to foot traffic in particular—are destructive in cities. There should always be a way around the visual interruption or through it, a way that is obvious as a person reaches it, and that then lays out before the eyes a new street scene. This attribute was summed up neatly by the late Eliel Saarinen who is reported to have said, in explaining his own design premises: "There must always be an end in view, and the end must not be final."

Fourth, visual interruptions get their force partially from being exceptions to the rule. Too many of the same kind can cancel themselves out. For instance, if plazas along the side of a street are plentiful, the street disintegrates visually as a street, to say nothing of going dead functionally. Building jogs into the streets, with arcades beneath, if they are plentiful instead of exceptional, merely yield a narrower street and can even become claustrophobic in their effect.

Fifth, a visual street interruption is a natural eye-catcher and its own character has much to do with the impressions made by the entire scene. If it is banal, vacuous, or merely messy, it might better not exist. A gas station or a bunch of billboards or a vacant and neglected building in such a place casts a pall out of all proportion to its size. A visual street interruption which is

* It also provides an example of an extra street, Vanderbilt Avenue, with T terminations, and at Vanderbilt's northern T is a handsome new building, Union Carbide, which in effect bridges the sidewalk; the short blocks between Vanderbilt and Madison are illustrative, by the way, of the liveliness and pedestrian convenience natural to short blocks in cities.

* Elsewhere in her book, the author describes the conditions required for economic stimulation and incubation of urban diversity.

also beautiful is great luck, but when we go after beauty too solemnly in cities we generally seem to end up with pomposity. Beauty is not around for the asking, but we can ask that visual interruptions be decent.

Unifiers

There are some city streets which, in the absence of visual interruptions or even in addition to them, need another kind of design help. They need unifying devices, to suggest that the street, with all its diversity of uses and buildings and activity of people, is also an entity.

On certain streets an essential street unifier is scale: control of the length of street frontage permitted to any single enterprise. For example, many city "residential" streets shelter, along with their dwellings, all kinds of commercial and working uses, and these enterprises can and do fit in well, so long as the street frontage which each one occupies is no greater, say, than that taken up by the typical residence. Literally, as well as figuratively, the uses fit in. The street has a visual character which is consistent as well as being various and interesting.

But on just such a street, a use that abruptly takes street frontage on a large scale can appear to explode the street—make it fly apart in fragments, although exactly the same *kinds* of uses at small scale do no harm and are, indeed, an asset.

This problem has nothing to do with "use," in the usual zoning sense. A restaurant or snack bar, a grocery, a cabinet maker, a printer's shop, for instance, can fit well into such a street. But exactly the same *kinds* of uses—say a big cafeteria, a supermarket, a large woodworking factory or a printing plant—can wreak visual havoc because they are on a different *scale*.

Such streets need controls, but the controls needed are not controls on *kinds* of uses. The controls needed are *size* controls on street frontage permitted to a use.

This is so obvious and so ubiquitous a city problem that one would think its solution must be among the concerns of zoning theory. Yet the very existence of the problem is not even recognized in zoning theory.

By no means all city streets need zoning for scale of street frontage. Many streets, particularly where large or wide buildings predominate, whether for residential or for other uses or both, can contain enterprises of large street frontages, and mix them with small ones too, without appearing to explode and disintegrate, or without being functionally overwhelmed by one use. Fifth Avenue in New York, for example, has such successful mixtures of large and small scale. But those city streets that do need scale zoning need it badly, not just for their own sake but because the presence of streets with consistent character adds diversity to the city scene itself.

Professor Eugene Raskin, of the Columbia University School of Architecture, has suggested that the greatest flaw in city zoning is that it *permits monotony* of uses. I think this is correct. Perhaps the next greatest flaw is that city zoning ignores *scale* of use, where this is an important consideration, or confuses it with *kind* of use, and this leads, on the one hand, to visual (and sometimes functional) disintegration of streets, or on the other hand to indiscriminate attempts to sort out and segregate kinds of uses from one another, no matter what their size or empiric effect. Intricate urban diversity itself is thus unnecessarily suppressed, rather than one limited manifestation of it in certain places.

For another family of street-unifying tactics, it is possible to exploit the principle that a strong, but otherwise unobtrusive, design element can tie together in orderly fashion much happenstance detail, suggesting "all this is an entity." This kind of unification can be useful on streets that are heavily used, much seen, and contain much detail without much real variety of use—streets almost entirely commercial, for instance.

One of the simplest such devices is trees along the stretch to be unified, but trees planted close enough together to give a look of continuity when they are seen close up, as well as when they are elided together by distance. Pavements have possibilities as unifiers; that is, sidewalk pavements with strong, simple patterns. Awnings in strong colors also have possibilties.

Each street that needs this kind of help is its own problem, and probably needs its own solution. There is a pitfall inherent in unification devices. One reason for a unifier's power is that it is special to a place. (The sky itself, in a way, ties together nearly every scene, but its very ubiquity makes it an ineffective visual unifier of most scenes.) A unifier supplies only the visual suggestion of entity and order; the viewer does most of the job of unifying by using the hint to help him organize what he sees. If he sees exactly the same unifier in disparate places, he will soon unconsciously discount it.

Art, if it is successful, does not attempt to replace or repress life, but to clarify it with the wonderfully economical communication of suggestion and symbol. Urban design is an art, and the principal tactics needed are visual suggestions that help people make, *for themselves*, order and sense, rather than chaos, from the rich and intricate urban life they see on a free and lively city street.

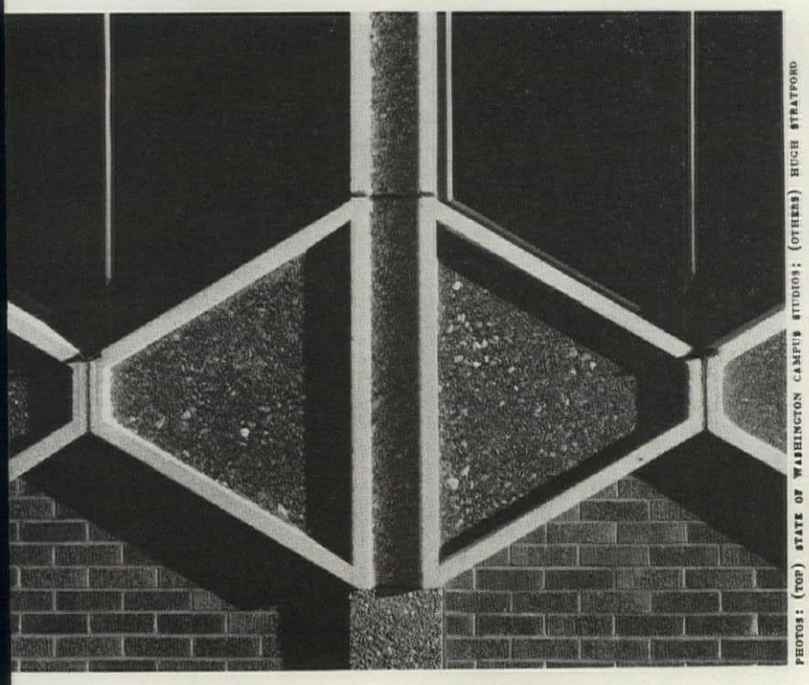
College Gothic in modern dress

From four campuses, examples of a rich and growing trend.



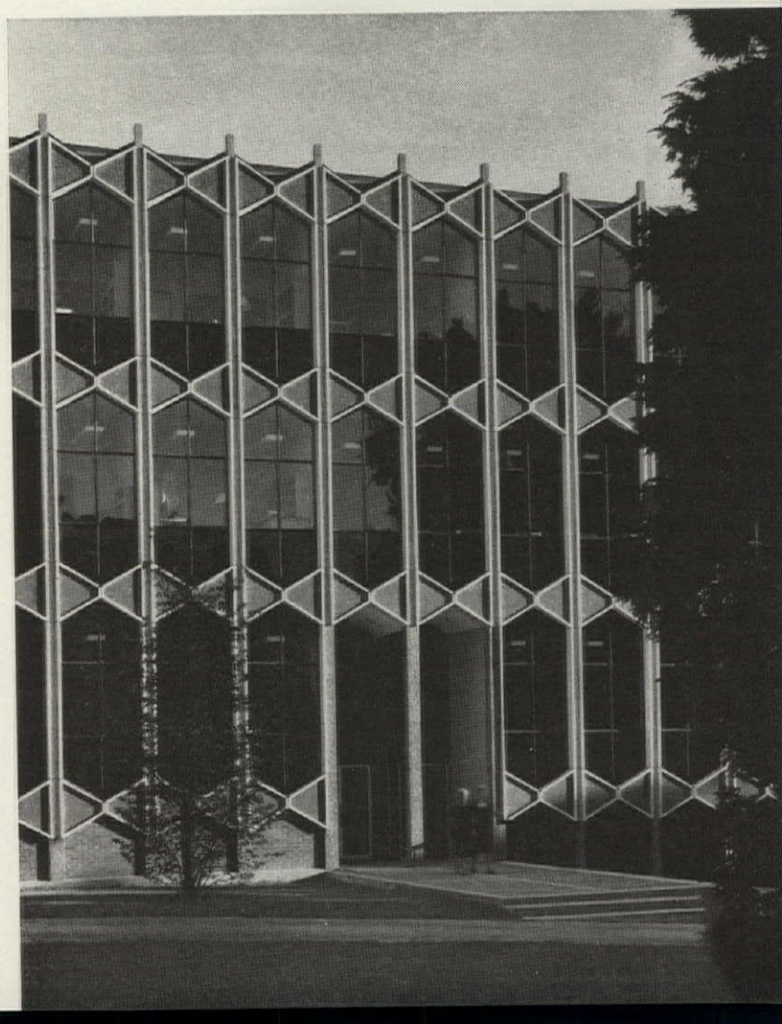


Precast tracery



PHOTOS: (TOP) STATE OF WASHINGTON CAMPUS STUDIOS; (OTHERS) HUGH STRATFORD

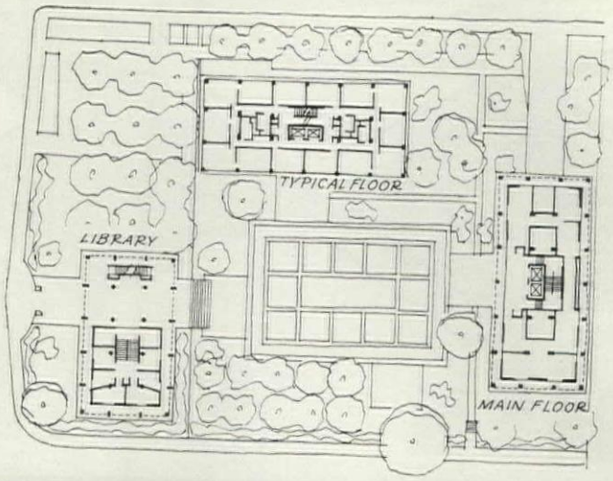




Due to carefully articulated, predominantly vertical façades, the University of Washington's General Engineering building takes its place comfortably amid the traditional and uninspired College Gothic of the Seattle campus. An interior structural core of reinforced concrete, designed to support classroom floors and resist seismic forces, left Architects Harmon, Pray & Detrich free to develop their elevations in a light, strongly rhythmical pattern of delicate scale reminiscent of late Gothic tracery. Slender steel columns at the periphery, spaced at 6-foot intervals to accommodate present and future partition systems, increase the sense of verticality and allow the use of light, diagonal cross-bracing in place of heavy spandrel girders. The entire exterior frame is sheathed with precast concrete: channel-shaped lengths for the columns extending above the roofline in finials, hollow, diamond-shaped covers for the cross-bracing forming stylized arched windows (detail photos above).

Total construction cost of the four-story building was $1,061,468, or $18.80 per square foot of gross area, financed by the State of Washington. Landscape architect: William Teufel. Structural engineers: Olsen & Ratti. Contractor: Wick Construction Co.

Towered dorms

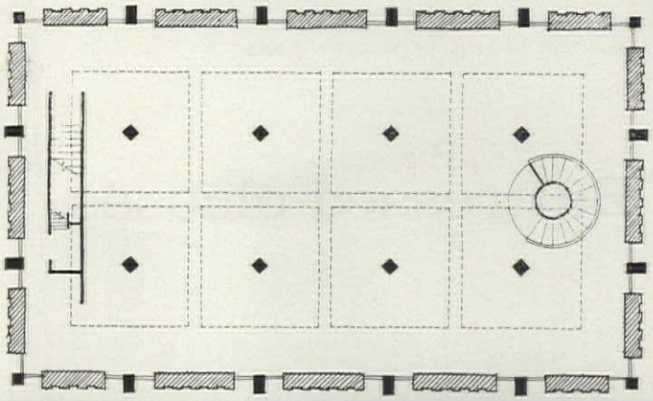




In designing additional dormitory space for Harvard's Leverett House, Architects Shepley, Bulfinch, Richardson & Abbott decided to build high. They did so because any low structure sufficiently large to accommodate all of the students would gobble up too much of the land and air available on the small site and thus eliminate one of Harvard's finest campus characteristics: the interior court. The two towers they produced not only leave the site free for a handsome landscaped yard, depressed slightly below street level, but also provide student residents with truly spectacular views of the Charles and the surrounding campus. The towers rise to 12 stories, actually no higher than several neighboring domes, and are crowned with tubular framework that conceals mechanical equipment behind a serrated silhouette.

In deference to the Georgian environment, red brick was carefully considered for the façades but finally rejected as too heavy and overpowering. Instead, large plates of gray-tinted glass, alternating with smaller casement windows, were installed in a bold limestone grid, with solid-color gold drapes behind them. By day, and particularly when the sun strikes them directly, the façades have an extremely elegant, burnished hue. By night, with ceiling spots backlighting the drapes, the effect is even more dramatic.

The interiors do not measure up to the elegance of the exteriors. Pumice block partitions, nonbearing and unreinforced, were chosen for reasons of economy and have tended to crack; the tile flooring, a prosaic stock gray, seems out of character with the luxurious exterior.





Circulation through the towers is not always clear and the central core facilities seem to squeeze the rooms up tight against the exterior walls.

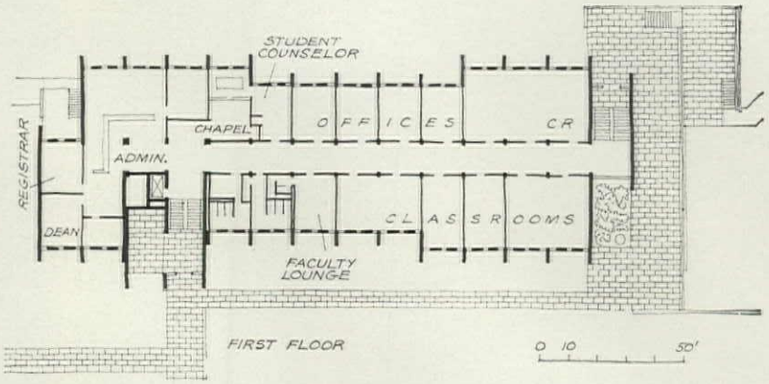
Across the landscaped court from the towers is Leverett's new library, an ingenious two-story structure with low peripheral ceilings cantilevered inward from exterior columns. Freestanding interior columns flare out into higher pads separated by continuous skylights which combine with clerestories for general overhead illumination. Small slit windows are deeply recessed to overcome distractions from busy Memorial Drive.

Landscape architects: Sasaki, Walker & Associates. Engineers: Abraham Woolf & Associates, Inc. (structural), Thompson Engineering Co. (electrical). Contractor: George A. Fuller Co.



PHOTOS: GOTTSCHO-SCHLEISNER

Buttressed classes





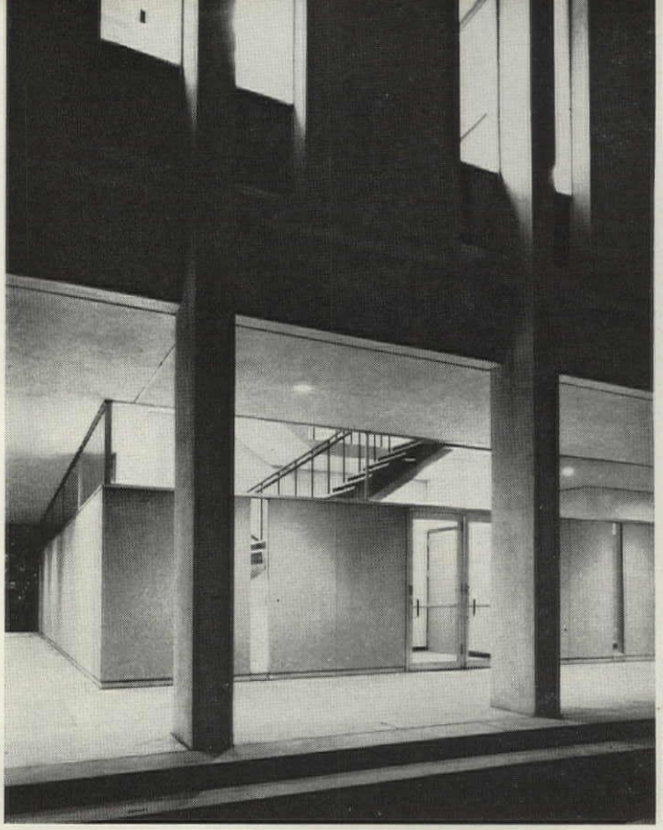


PHOTOS: LAWRENCE S. WILLIAMS, INC.

The new Bellarmine Classroom Building at St. Joseph's College, Philadelphia, deliberately evokes Gothic antecedents with its pronounced buttresses, vertical windows, and folded plate roof coming to a peak over each bay. The design, however, is quite obviously contemporary—and austerely appropriate to a Jesuit institution.

Staggered walls (see plan) provide a variety of spaces inside and give the exterior a richly changing aspect as sunlight and viewpoint shift. Student lounges and an equipment penthouse are neatly integrated behind a terra-cotta screen in the main stair tower, which lends cathedral-like prominence to the main entry below. The building has a structure of rough-formed concrete; the walls, inside and out, are of a grayish-brown brick set with tall windows of gray solar glass. Cost came to slightly more than $1 million, about $20 per square foot. Architect: Carlos J. Alvaré. Interiors and landscaping: Harkins & Alvaré (who also prepared St. Joseph's 20-year master plan). Engineers: Dorfman & Schwartz (structural), Robert J. Sigel (mechanical, electrical). General contractor: John P. Donovan.

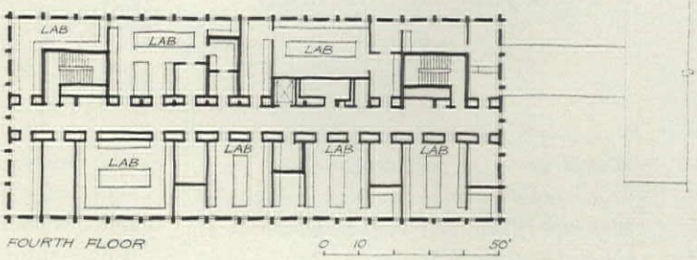
Tall-windowed labs

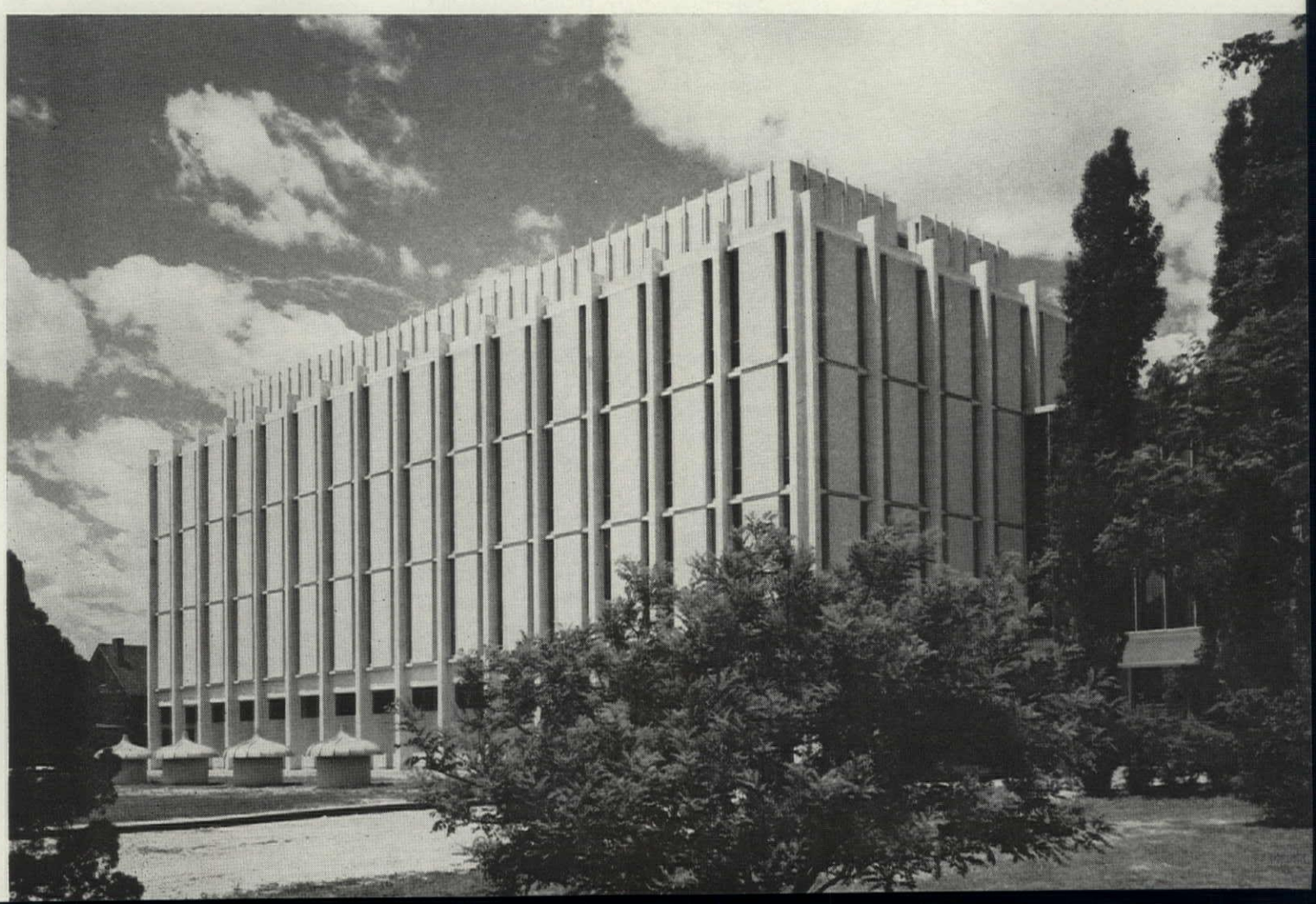


PHOTOS: BALTAZAR KORAB

Tall, narrow windows, separated by projecting columns that double as sun baffles, help reduce air-conditioning requirements of the new Life Sciences Research Center at Wayne State University, Detroit. This is crucial, for chemical fumes (and laboratory animals) do not permit recirculation of air. Fresh air is drawn in through four outdoor kiosks (see photo, below), conditioned by a 325-ton central system, distributed by half a dozen different supply units, and discharged by a battery of rooftop exhaust fans behind a decorative parapet.

The research center houses offices, aquariums, animal rooms, zero-degree cold rooms, and 46 chemistry and biology laboratories supplied with distilled water, natural gas, vacuum, and compressed air lines. Structural members of poured concrete were coated with white cement for a smooth finish, while wall panels were formed of white quartz aggregate for textural variety. Windows are gray glass, which helps reduce heat loads and glare. Cost was $1.9 million. The building was designed and engineered by Albert Kahn, Associated Architects and Engineers; design consultant: Walter B. Sanders.





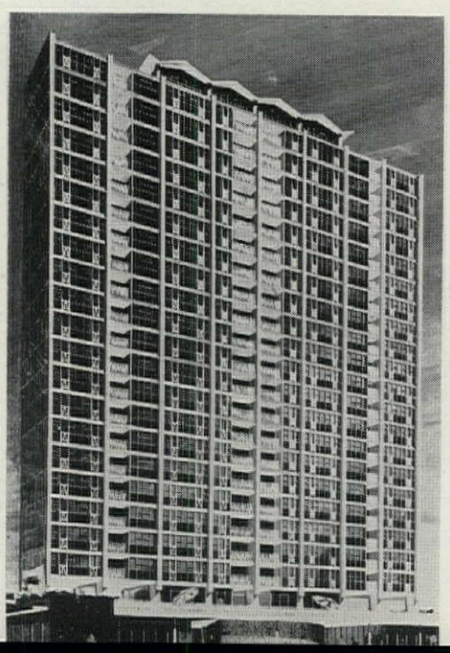
A new break for apartment owners

The "condominium" cooperative, now possible under the 1961 Housing Act, allows individuals to buy, mortgage, and sell apartments just like houses.

By HAROLD N. VOGEL

New Yorker Harold N. Vogel has spent 20-odd years in real estate, much of it as a housing manager and executive for sponsors of housing cooperatives. He is the author of "The Co-op Apartment," a buyer's handbook published last year.

Condominio Atlantico, *a 22-story apartment building, is the newest condominium cooperative planned for San Juan, Puerto Rico. Equitable Life will provide mortgage loans for qualified purchasers of the 82 units, which will share a second-floor swimming pool.*



Seldom is housing legislation as dramatic as the change recently achieved through Section 234 of the 1961 Housing Act (Public Law 87-70, 87th Congress). The amendment adds to existing enabling acts a method, entirely new to this country, of financing cooperative apartment houses. It is known as the "condominium" cooperative, a word derived from the Latin meaning "joint sovereignty." Its purpose is to give apartment dwellers the chance to own, mortgage, and sell their apartments with the same freedom that a home owner has in relation to his house.

Condominiums, or, as they are known under Puerto Rican law, "horizontal properties," were recognized under ancient Roman law, and have been used as a medium for cooperative ventures in many countries in Europe and South America. They differ from our accustomed co-op entities in one vital aspect: each owner holds individual title to his apartment. (General cooperatives are held by corporate entities; the individual has control only through his stock certificate in the corporation, not through a deed.) The change raises new questions, and at first glance may appear complicated when one considers the status of common facilities such as elevators, boiler rooms, etc. But detailed methods for incorporating the use of these facilities, and establishing liability to maintain them, have been worked out in a practical manner.

Last year, the Banking and Currency Committee of the 86th Congress held hearings on condominiums. The Resident Commissioner of Puerto Rico and others familiar with them testified to their great popularity in that island, where they have been legal for several years. Since passage of the U.S. law, the Federal Housing Administration has been concluding its own research into specifics of rules and administration. Recently the Equitable Life Assurance Society of the U.S. agreed to finance for individual owners the apartments in a 22-story structure to be built under this plan in San Juan (see sketch). U.S. title companies such as Home Title Guaranty of New York have opened, or plan on opening, branch offices in Puerto Rico, and are becoming familiar with their particular aspects of this new activity. In New York, Alan H. Polkes, an ex-Webb & Knapp lieutenant, has organized a firm named Condominium Enterprises to avail the apartment-seeking public of the benefits of the new legislation.

The big difference

The major selling point about condominiums is that they allow the individual greater freedom than stock ownership does. This fact should open the market for cooperative apartments to additional thousands of potential customers who have not liked the usual restrictions of co-ops. Many apartment seekers want to own their apartments, not stock certificates, free and clear of mortgage indebtedness. Many others want to be free to finance their initial purchase by a mortgage, or to mortgage their premises later on, in any amount that economic conditions permit. Only with deed ownership goes the right to raise a mortgage in any amount which the value of the particular apartment warrants at the time; to pay off the mortgage at any time one decides; to rent, give, or bequeath the apartment in much the same way as a privately owned house. In condominiums, each deed is recorded in a sep-

arate transaction, and real estate taxes are levied on an assessment made of each unit. This overcomes the objection that many a would-be member of a cooperative feels against having a corporation or other organization hold title to "his" apartment.

In the condominium system, there is also a common liability to maintain "common elements of the property." These include, but are not necessarily limited to: 1) land upon which the structure stands; 2) foundations, roofs, halls, elevators, and heating plants; 3) all other devices or installations existing for common use, or necessary to the existence, upkeep, and safety of the property.

In addition, there may be "limited" common elements, such as hallways on each floor, which are largely limited to use by the owners residing on that floor. These owners as a group might well hire an architect to design or decorate the hall and elevator lobby on that floor, just as they individually seek the services of an architect for their own apartment.

In yet a third category are "private" common elements: such items as window glazing, screens, and awnings. By taking into account elements in all three categories, insurance policies may be issued with premiums based on the division of responsibility of the assured.

The economics of each owner's liability to maintain the property is established at the time the condominium is formed, and is based on the value of the apartment in relation to the value of the whole. The value thus established cannot change without the consent of all the owners. This value, however, does not affect the real or cash (market) value of the investment.

Purists who advocate only the customary concept of cooperative housing will be glad to note that Section 213 cooperatives have been excluded from the provisions of Section 234. Some supporters of 213 feel that condominiums will lead to speculation, while shutting their minds to the speculative aspects of resale policy in many existing cooperatives. Speculation, or selling at a profit made available through demand, cannot be legislated out of the minds of those inclined to think in this way. Quite the contrary, it can be argued that the ability to raise a new mortgage upon the resale of a unit solves the problem of "213" stockholders of collecting the increased equity they have built up by way of amortization payments. Under the condominium, retiring owners will be able to receive full value for their deed, and the new purchaser will have the considered opinion of the mortgagee on which to judge his value.

Hawaii leads the way

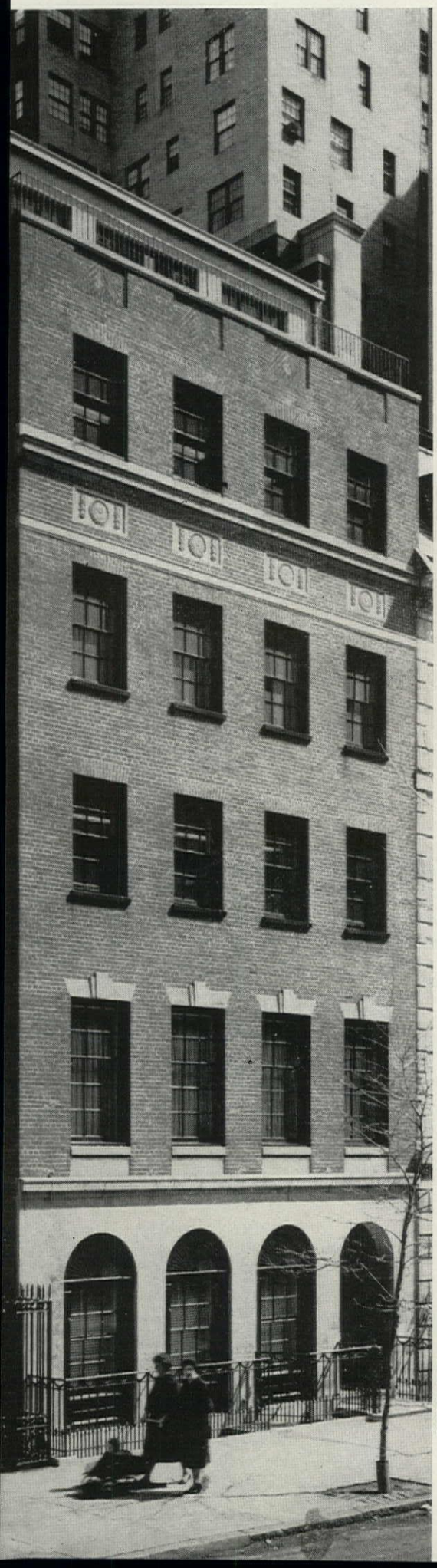
Builders undoubtedly will be quick to recognize the new market opened up to them by such "private-house" thinking adapted to multifamily structures. They, and buyers and their lawyers, should be familiar with restrictive covenants in deeds, and this is the method of control in condominiums. The common good that restrictive covenants serve is widely recognized, and Puerto Rico's Horizontal Property Law requires that each deed when recorded must contain, among other details, "everything relative to the administration of the property, and any further data in connection with the property which it may be advisable to set forth. . . ." A 1959 amendment to the Puerto Rican law requires that a certified copy of the plan of the apartment be filed with the deed.

Among U.S. states, Hawaii has led the way toward condominiums by passing an enabling act some six weeks ago. Florida and California are considering similar legislation. In each of these states property values have increased so fast that condominiums present a logical solution to the distribution of this increase among many ownerships. Condominiums with favorable FHA terms can offer a solution to the home seeker who enjoys good credit standing through steady earnings, but who lacks the down payment. They can also add to the housing inventory for our elder citizens, particularly the large group of retired people who have paid off the mortgage on their original home, and now want to use the cash from its sale to purchase a new, mortgage-free home in an apartment house rather than another burdensome, single-family house.

The Housing Act of 1961 places FHA mortgage insurance limits for condominiums at the same $4,250 per room now prescribed by Section 213 for elevator structures located in high-cost areas (some 40,000 of which have already been created) and adds the further provision of a 97 per cent mortgage available on the first $13,500 of appraised value. This latter provision is similar to the provisions of Section 203, which are popular throughout the U.S. for private home construction.

The condominium combination of long-term financing in favorable amounts with the spirited help of the FHA should have the Utopian result of satisfying both builder and purchaser. It is an opportunity a large segment of the buying public has long been waiting for.

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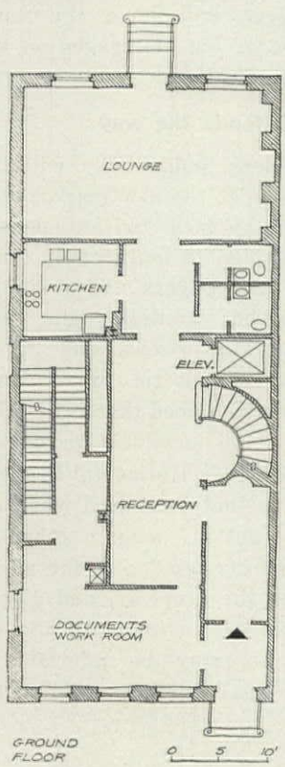
PHOTOS: GEORGE CSERNA

A residence transformed for research

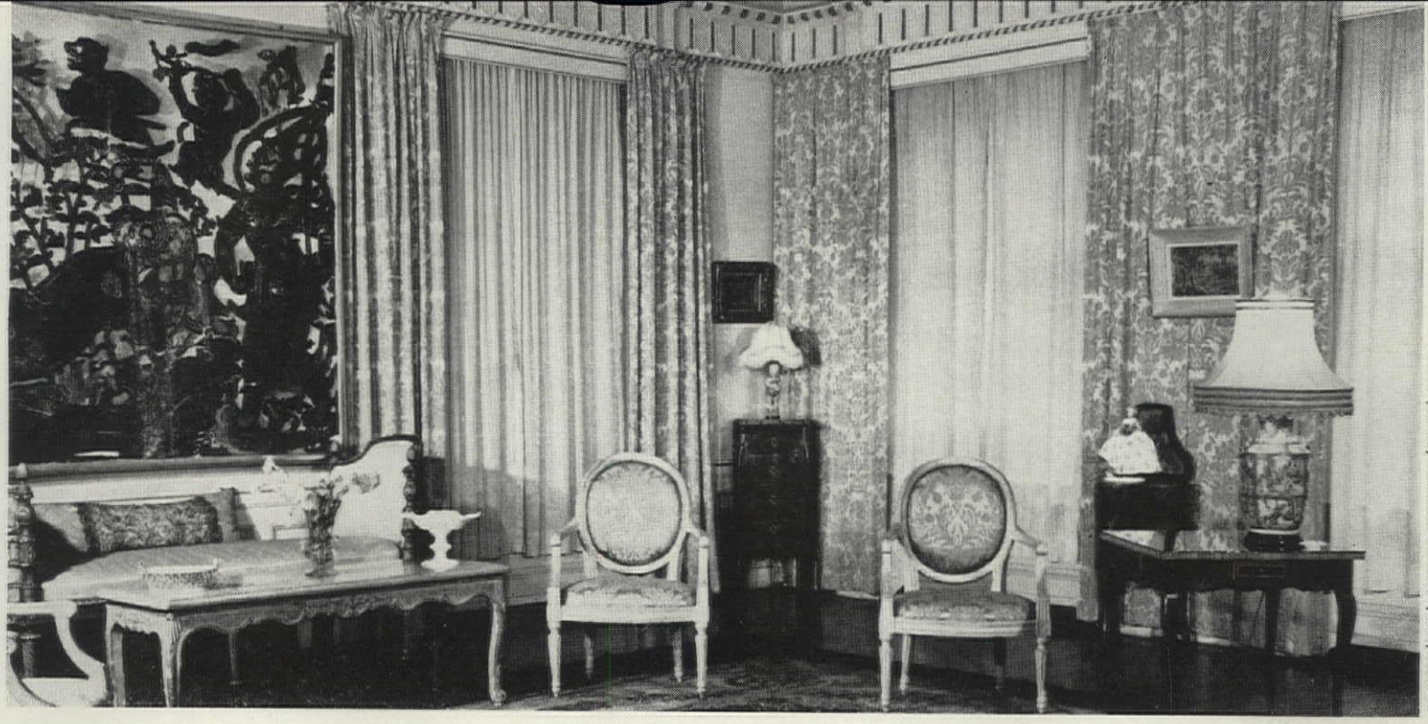
In the 1920s, Financier Walter Rothschild commissioned Architect Aymar Embury to build him a Manhattan town house. The resulting brick residence at 41 East 70th St. survived almost two generations as a fitting background for the genteel glint of crystal and the elegant rustle of brocade. Like so many of its brethren, however, the house is now cast in a very different role. But with the help of sympathetic remodeling, it has managed to make the change like a gentleman.

Embury's fine façade was hardly touched (photo, left). Inside, however, Architect Edward L. Barnes used neat details, good taste, and gallons of white paint to transform the rich and darkly paneled parlors into spare, well-



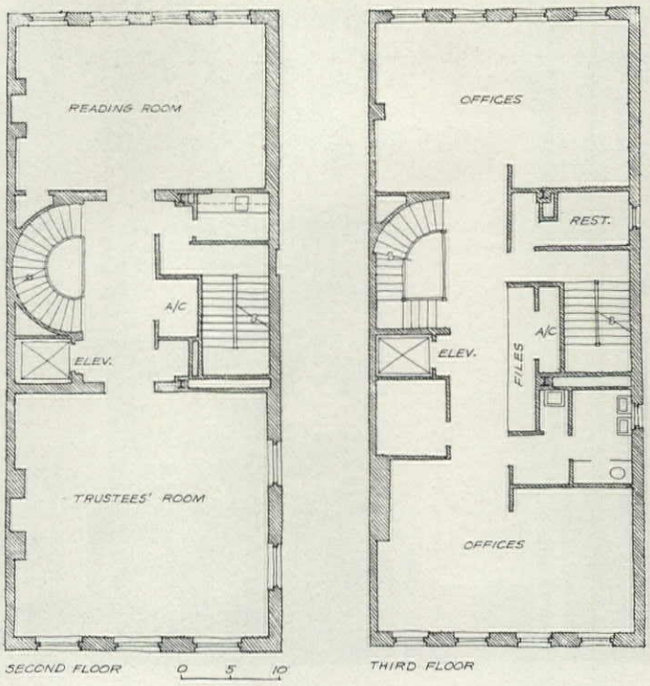


scrubbed offices for The 20th Century Fund. On the ground floor (photo above, plan below), a new entrance hall leads back to the former library, now an employee lunch room and lounge (the tapestry—"Alphabet," by A. A. Anderson—is part of a modest but striking collection gathered by Fund Director, and occasional FORUM Contributor, August Heckscher). The old stairs, set off by new backlighted planting, lead to second-floor meeting and reading rooms, and on up to offices for the staff divisions of the Fund. The major change was the introduction of a compact modern service core incorporating fire stairs, plumbing, and air conditioning, which feeds out from central floor units through new ceilings. Interiors: Tysinger Design Associates. Engineers: McGuinness & Duncan. Contractor: Rheinstein Construction Co.

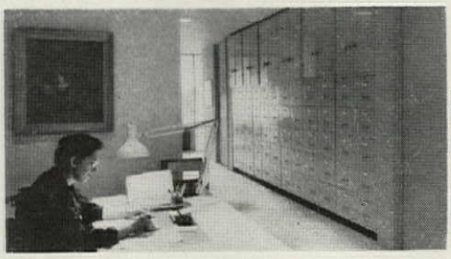


PHOTOS: (LEFT) JOSEPH LOEVENICH; (BELOW) GEORGE CSERNA

Living room *of recent owner, Mrs. Lony Arnault, was done in Louis 16th and heavy gold brocade (above). It is now a spare, striking meeting room for the Fund's trustees (below). New dropped ceiling houses lights that wash the walls, the big walnut table, and an oil by Allan Porter.*







PHOTOS: GEORGE CSERNA

New service core *conceals air conditioning behind paneling in second-floor hall (top), behind files in upper office halls. Plans at left show steel columns supporting new equipment, fire stairs, rest rooms, pantry.*

Fourth-floor office of Fund Director August Heckscher has work desk separate from conference area. Hung ceiling hides cooling ducts.





JOSEPH LOEVENICH

Second-floor dining room (above) became a handsome reading room (below). Special book rack is lighted from ceiling baffle above; table surface is illuminated by buried lights shining up into reflectors. Repainted fireplace and closed-in shelves are at the other end of the room, not shown.

GEORGE CSERNA



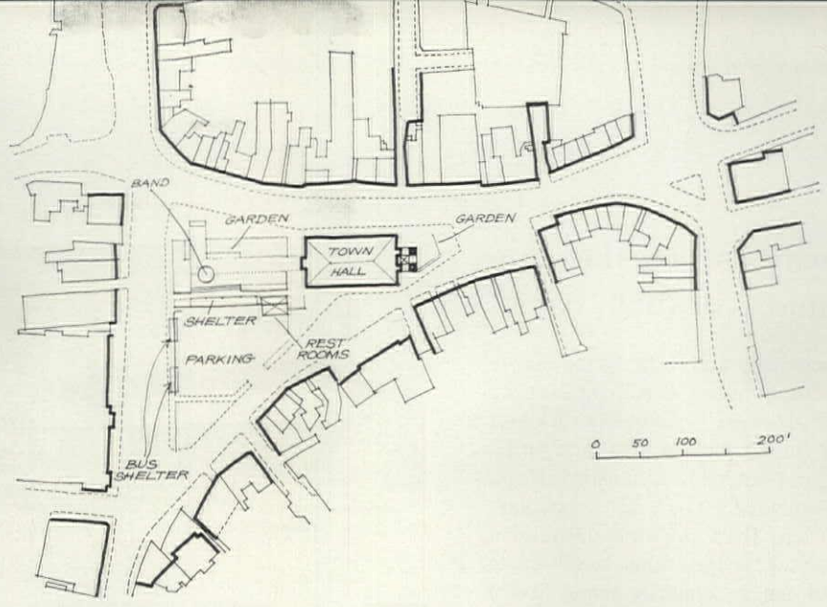
Traffic blight *bid fair to swallow Burslem's town hall (right). A pleasant village character was regained when road patterns were altered, buses rerouted, shop fronts refurbished, and greenery introduced (below).*

Burslem battles blight





Smart new bus shelters welcome travelers.



Plan of Burslem's rebuilt center shows surrounding shops, which were also remodeled.

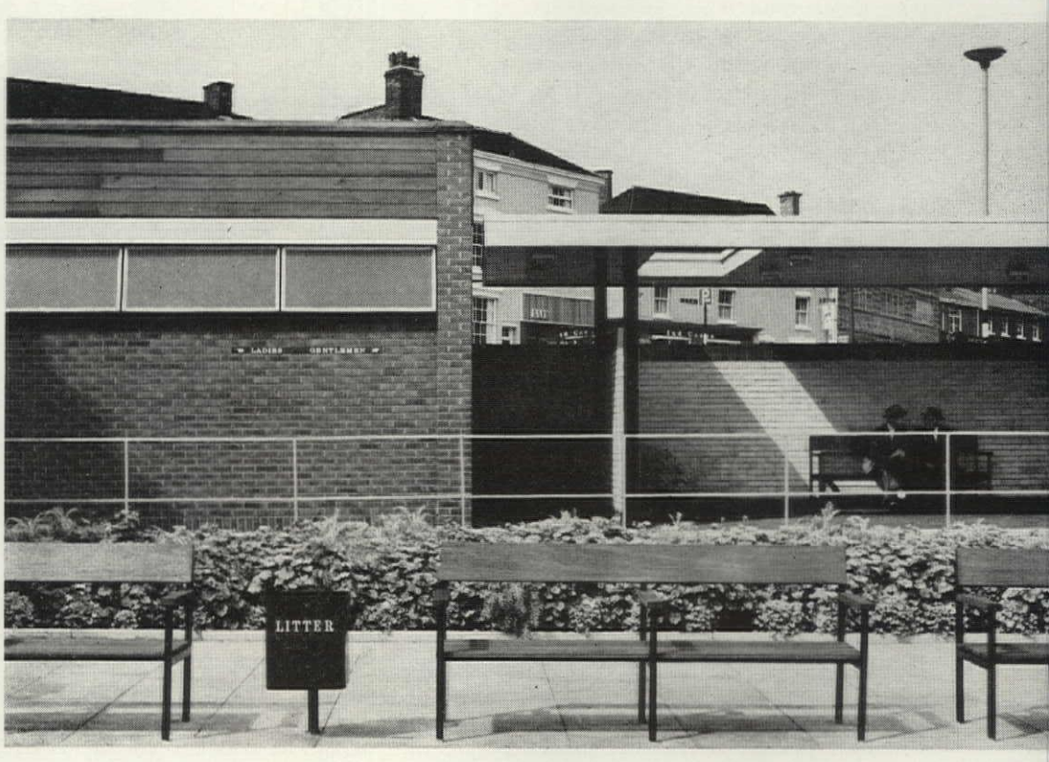
New shelter, rest rooms, and gardens were built around town hall (photos below).

The modest urban renewal effort of Burslem, England (population 80,000), carries some pointed lessons for U.S. communities seeking to rebuild: it shows what can be done with minimum use of the bulldozer, and maximum cooperation among all concerned. Initiated as part of the jubilee celebrations of the pottery cities of Stoke-on-Trent, the basic objective of the project was to transform a visually squalid, traffic-choked central area into a lively focal point for the town.

By closing one short central street, realigning curbs, and rerouting buses slightly, the town hall was freed from congestion. The bus company not only backed the idea but seized the chance to design smart new bus shelters and signs. The town itself replaced eyesore random parking with a garden area, rest rooms, shelter, and a new landscaped parking lot.

To promote polite diversity within broad limits of good taste, ranges of colors, type faces, curtain and shop-blind materials were prescribed for the surrounding properties. Of the 80 owners involved, all but two submitted their plans to the coordinating architect, provided by Britain's Civic Trust.

The project's total cost of $84,000 was shared by the City Council and individual property owners. Misha Black of Design Research Unit was coordinating architect. Work on individual shops and buildings was performed by ten different area architects, who donated their services as their contribution to the jubilee.





ALTMAN PHOTOGRAPHS

Highway store becomes a smart branch bank

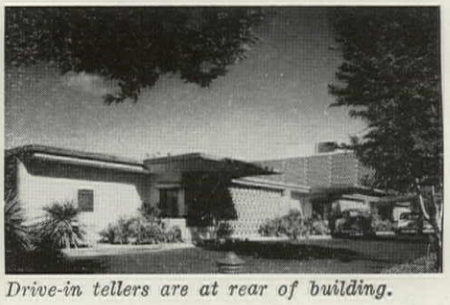
By remodeling and adding to an old garden supply house, the First National Bank of Hawaii (formerly Bishop's National Bank) gained a branch on Honolulu's land-scarce and bustling Kapiolani Boulevard for an estimated $100,000 less than the cost of building from scratch. Since the bank caters mainly to the automobile trade and no large vacant sites were available, the sizable outdoor nursery area in back made an excellent place for major parking and drive-in banking facilities. The old building and the addition, roughly equal in area, were tied together by a screen of triangular concrete block at the second-floor level. The addition has been designed to take an eight-story office tower when the bank's central clearing activities are moved to this branch. Total cost of the remodeling came to $526,990.

Architect: Wimberly & Cook. Landscape architect: George S. Walters. General contractor: E. E. Black, Ltd.



DANNY MORSE

Old store (above) was screened to form bank.



R. WENKAM

Drive-in tellers are at rear of building.



R. WENKAM

First half statistics: rebuilding still going up

While new building is currently on the upswing and helping the U.S. economy work itself out of a recession phase, rebuilding continues to prove itself a valuable partner, marching steadily upward with less apparent concern for business cycles. FORUM's latest quarterly report, based on building permit data from 16 selected cities, shows that additions and alterations, which during the first quarter of the year stood 5 per cent over 1960, have now risen to 9.4 per cent over last year (see table). In some cities, declines in new building are being cushioned by major gains in rebuilding—e.g., while new building in Atlanta fell off one-third, remodelings rose nearly 50 per cent; in Pittsburgh a 6 per cent decline was offset by a rebuilding increase of over 80 per cent.

REBUILDING PERMITS, 1ST HALF 1961

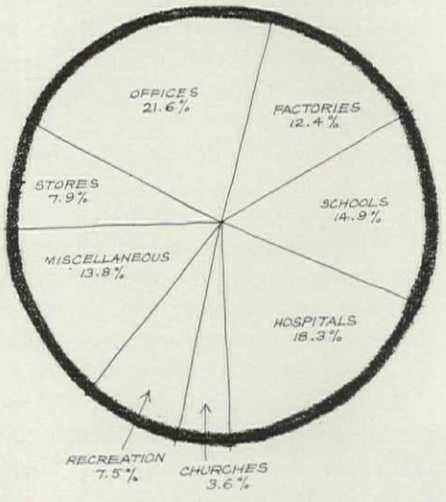
Additions and alterations, in thousands of dollars

City	*Residential*	*Nonresidential*	*Total*	*Change '60-'61*
ATLANTA	$ 2,726	$ 10,100	$ 12,826	+ 49.7%
BOSTON	2,312	6,908	9,220	+ 24.7%
BUFFALO	707	3,842	4,549	+ 43.0%
CHICAGO	4,771	16,763	21,534	— 18.2%
CLEVELAND	6,902	13,782	20,684	+ 48.4%
DENVER	3,524	9,588	13,113	+335.8%
DETROIT	2,254	18,001	20,255	+ 12.0%
LOS ANGELES	18,745	24,041	42,786	— 11.5%
MINNEAPOLIS	1,506	4,323	5,829	— 11.1%
NEW YORK	17,540	47,077	64,617	+ 6.3%
PITTSBURGH	1,292	7,686	8,978	+ 80.4%
PHILADELPHIA	2,127	14,937	17,064	+ 71.1%
ST. LOUIS	1,114	4,802	5,916	+ 20.6%
SAN FRANCISCO	3,068	6,194	9,262	— 56.2%
SEATTLE	2,681	13,510	16,181	+ 12.2%
WASHINGTON*	1,542	3,849	5,391	— 20.1%
TOTAL	$72,811	$205,403	$278,214	+ 9.4%

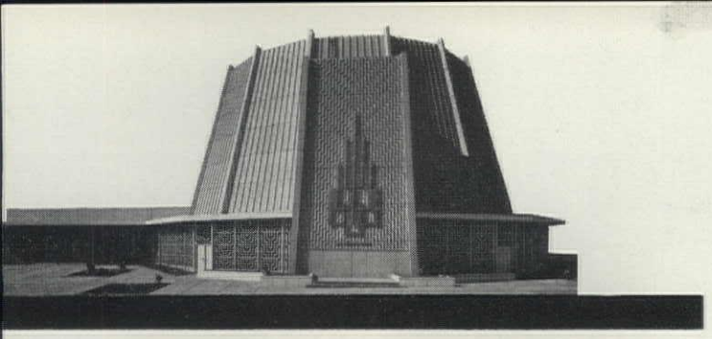
* Does not include government building.

While home building has been increasing its share of the new building market, nonresidential work continues to dominate the additions and alterations field, accounting for almost 74 per cent of the total dollar volume (vs. 73 per cent during the first six months of 1960). In some areas, notably Pittsburgh, Buffalo, and Detroit, nonresidential rebuilding accounted for 85 or more per cent of the remodeling field.

FORUM's figures, moreover, indicate a continued and marked increase in the remodeling of hospitals and recreation buildings (see chart). During the first six months of 1961, 18.3 per cent of all nonresidential rebuilding—nearly a fifth of the total—went to hospitals, compared to 8.2 per cent during the same period last year. Remodeling of recreational facilities, both public and commercial, has risen from 1.4 per cent of the total to 7.5 per cent. Office buildings showed an increase from 17.7 to 21.6 per cent, while schools and churches remained fairly constant. Store remodeling dropped off slightly; factory rebuilding, although it showed a sharp decline from 21.7 to 12.4 per cent for the first six-month period, is running at about the same over-all level that it did for the year 1960.



Share of nonresidential rebuilding market *ascribed to eight different building categories for the first six months of 1961 is shown in the pie chart above. Boston, Chicago, Cleveland, Detroit, New York, St. Louis are the cities whose permit data supplied the analysis.*



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FOR SEATTLE SYNAGOGUE

"An expression of the majesty of creation"

Mo-Sai panels and grilles in a wide variety of sizes and shapes produce the interesting facade for the Temple de Hirsch in Seattle. The largest Mo-Sai unit, a single dome panel, weighed 3¾ tons. The smallest, a filler used in the grillwork, weighed only three pounds. Special colored glass units symbolizing Jewish Holy Days, were inserted into Mo-Sai grille units, which were precast under plant controls to very accurate dimensions in order to accommodate them.

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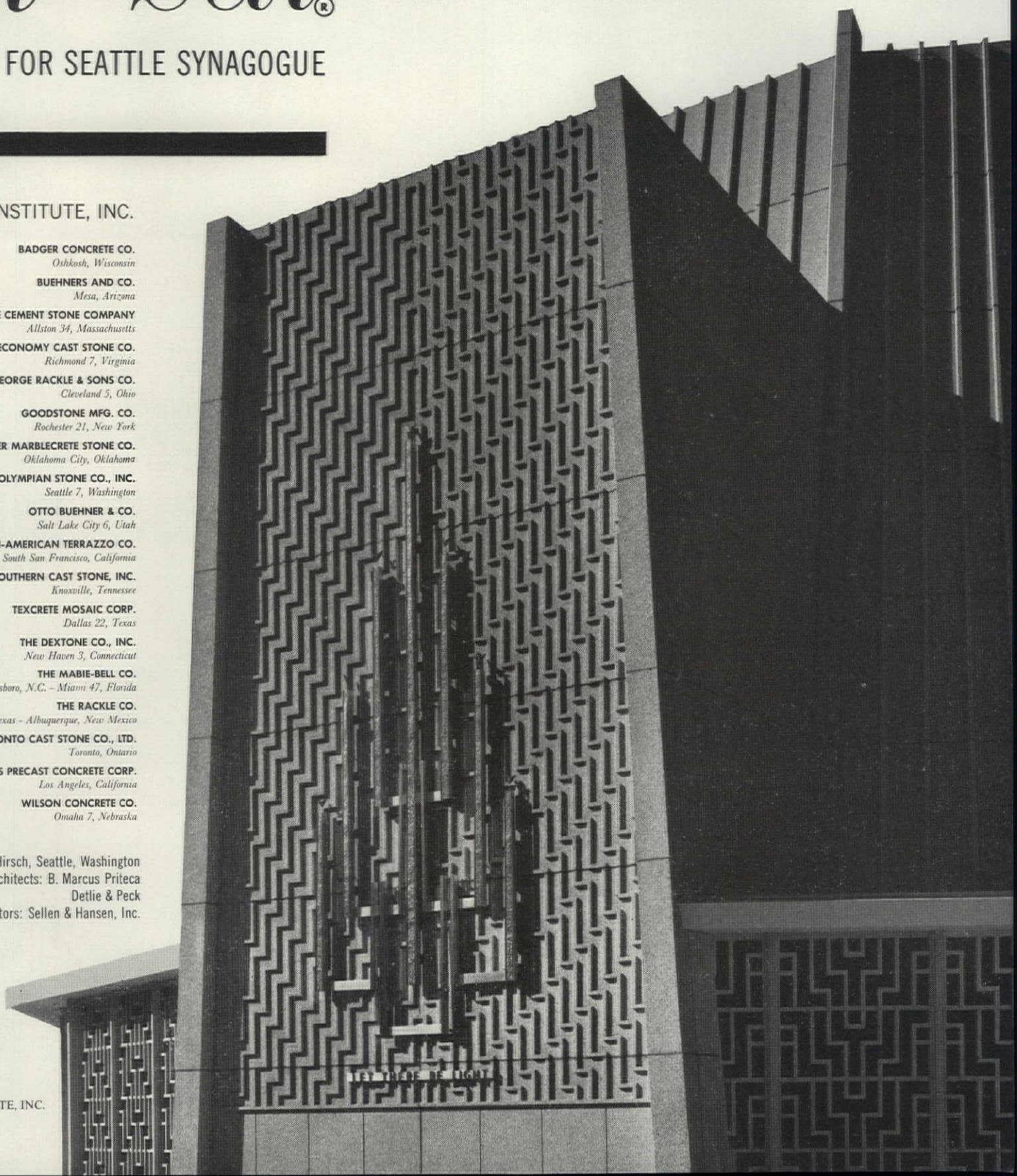
THE RACKLE CO.
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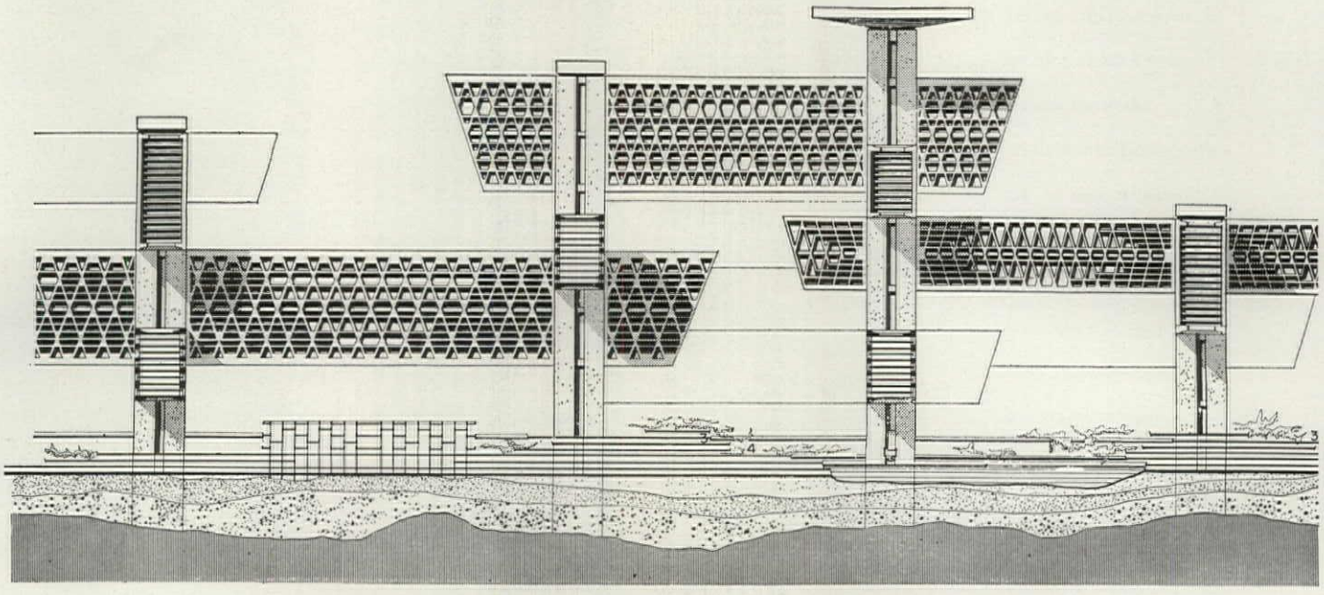
WILSON CONCRETE CO.
Omaha 7, Nebraska

Temple de Hirsch, Seattle, Washington
Architects: B. Marcus Priteca
Detlie & Peck
General Contractors: Sellen & Hansen, Inc.

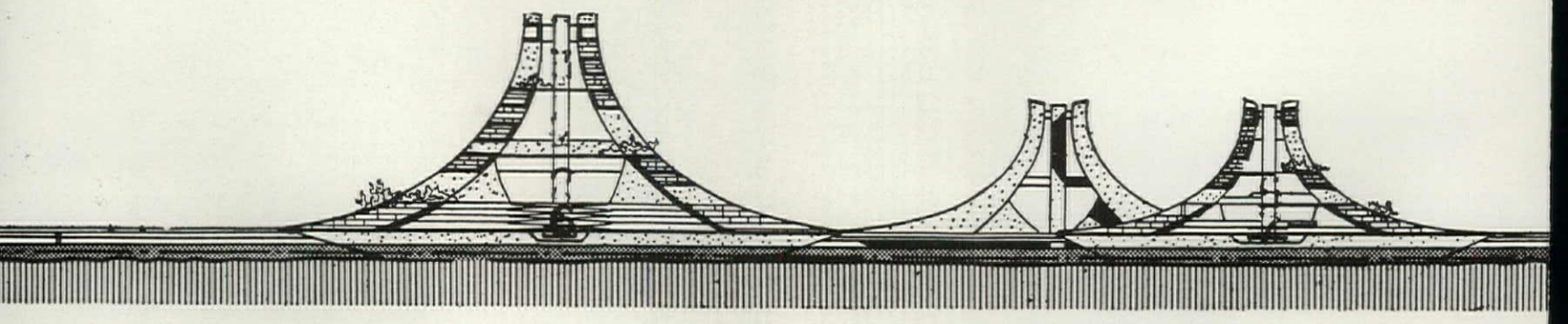


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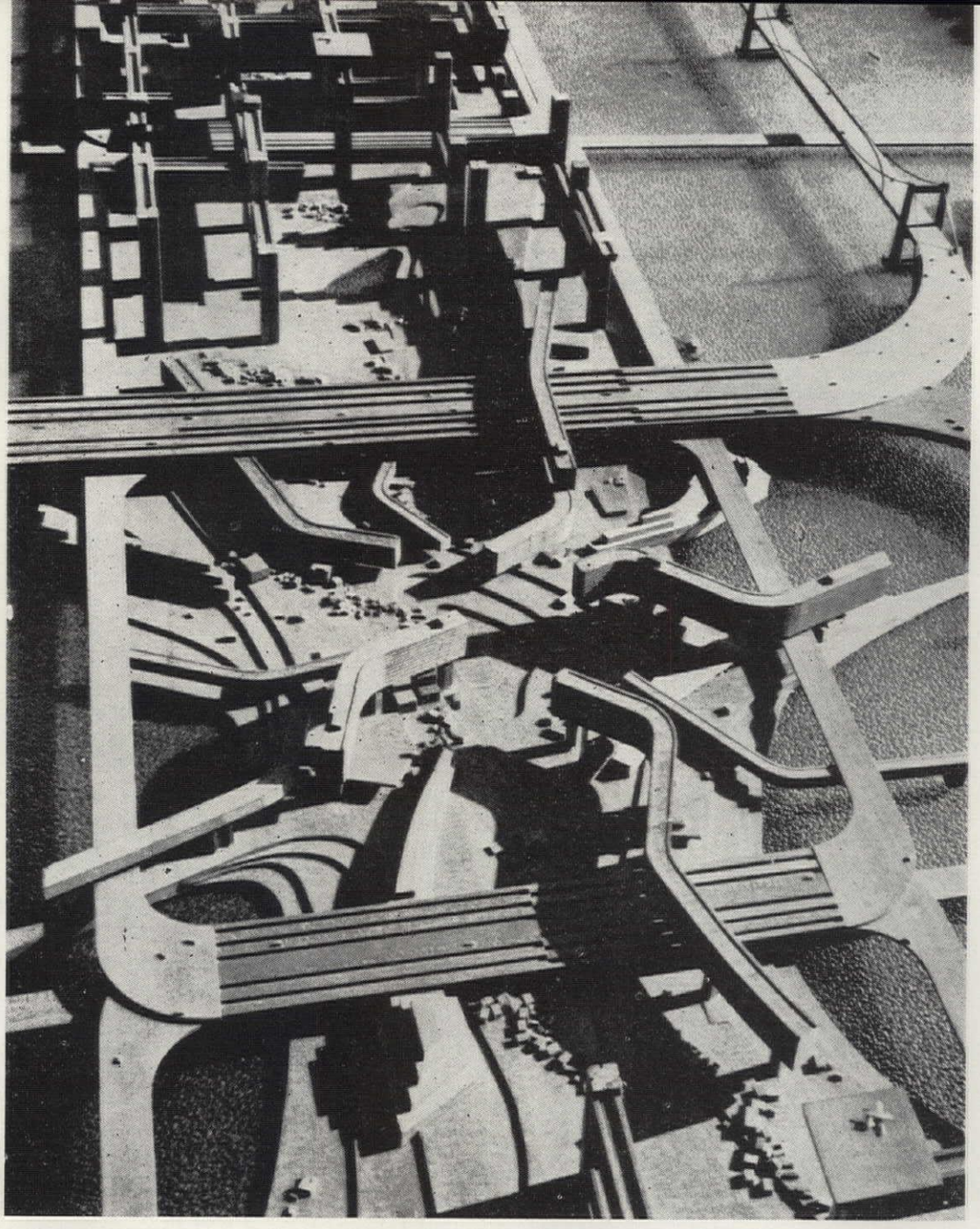
Trussed office buildings rise on their service cores (above). Below, residential islands with templelike terraces.

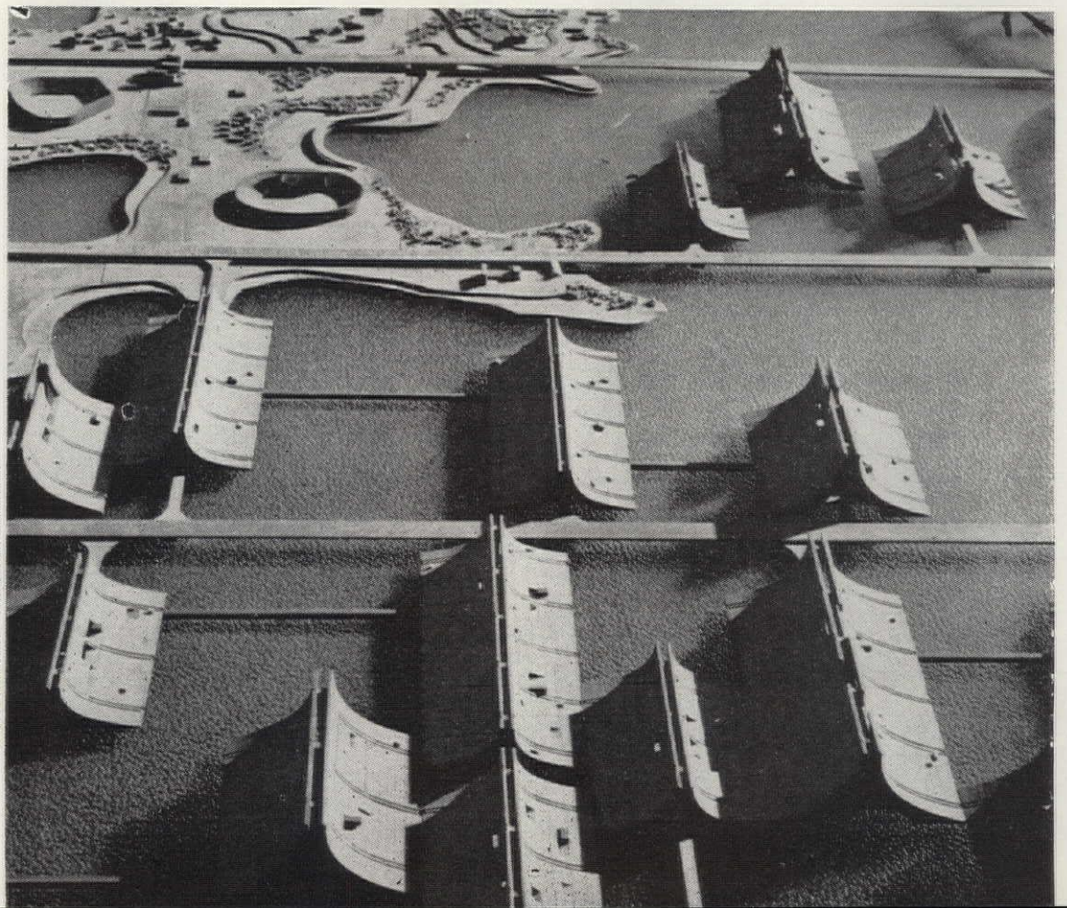


TOKYO INTO VENICE?

Tokyo, with 10 million souls, has become the largest and most spectacularly crowded city in the world. A million commuters a day mingle with 1.5-million short-haul workers to create murderous jams in train stations and streets, while people and cars continue to proliferate and the suburbs move farther and farther out.

To rescue Tokyo from a dire megalopolitan fate, Japanese Architect Kenzo Tange and a team of colleagues propose the admittedly radical scheme shown here: a new "linear city" for 5 million residents and 2.5 million workers launched across Tokyo Bay (left), replacing the single civic center and radial pattern of the middle ages that, Tange feels, throttles most of the big cities of today. Like a vertebrate spine, the new civic axis would grow out of the present downtown over a period of 20 years, with a new office district as its first cycle, then a new railroad station, harbor, government district, and more offices, hotels, shopping, recreation. Huge peripheral highways built as suspension bridges would carry a monumental 200,000 cars per hour snaking back and forth along a system of roads within roads with monorails suspended underneath. On the filled land at the center, major buildings would rise as great trussed structures supported on their service cores, freeing the ground for parks, garages, pedestrian walks, and shops (sketch left, photo above, right). Causeways branching out from the spine would lead to clusters of man-made residential islands (bottom photo and sketch). Each island would have central levels for parking, monorail terminals, shopping centers, and schools. Outside, terraces rising toward templelike peaks would yield random patterns of platforms on which a variety of individual houses or apartments could be built. END





PHOTOS: COURTESY "THE JAPAN ARCHITECT"

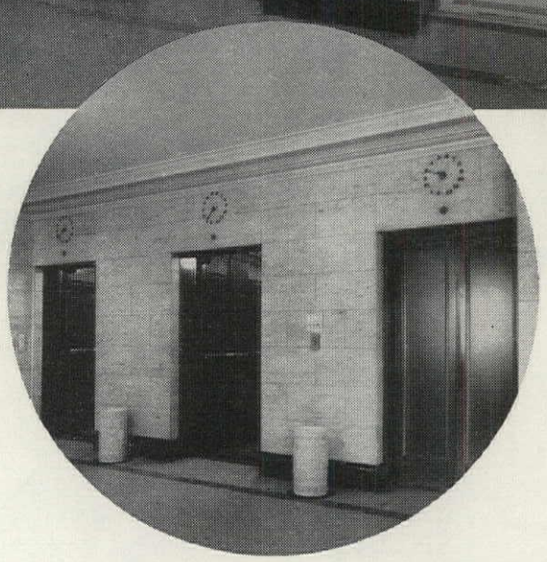
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"Our recent decision to modernize by MONTGOMERY was determined by the prompt service, efficient and smooth operation of our equipment under the Montgomery PREVENTIVE MAINTENANCE program."

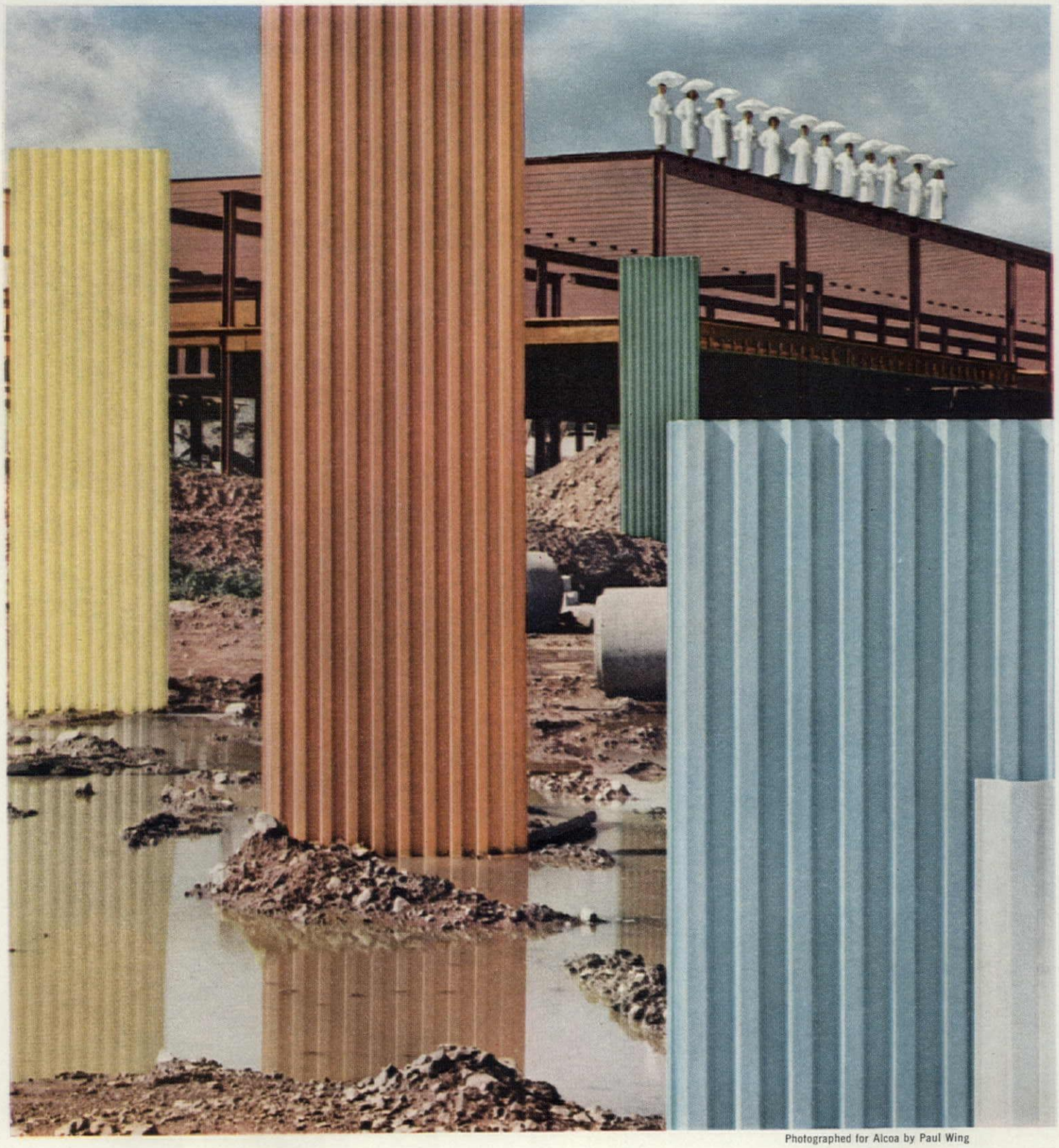
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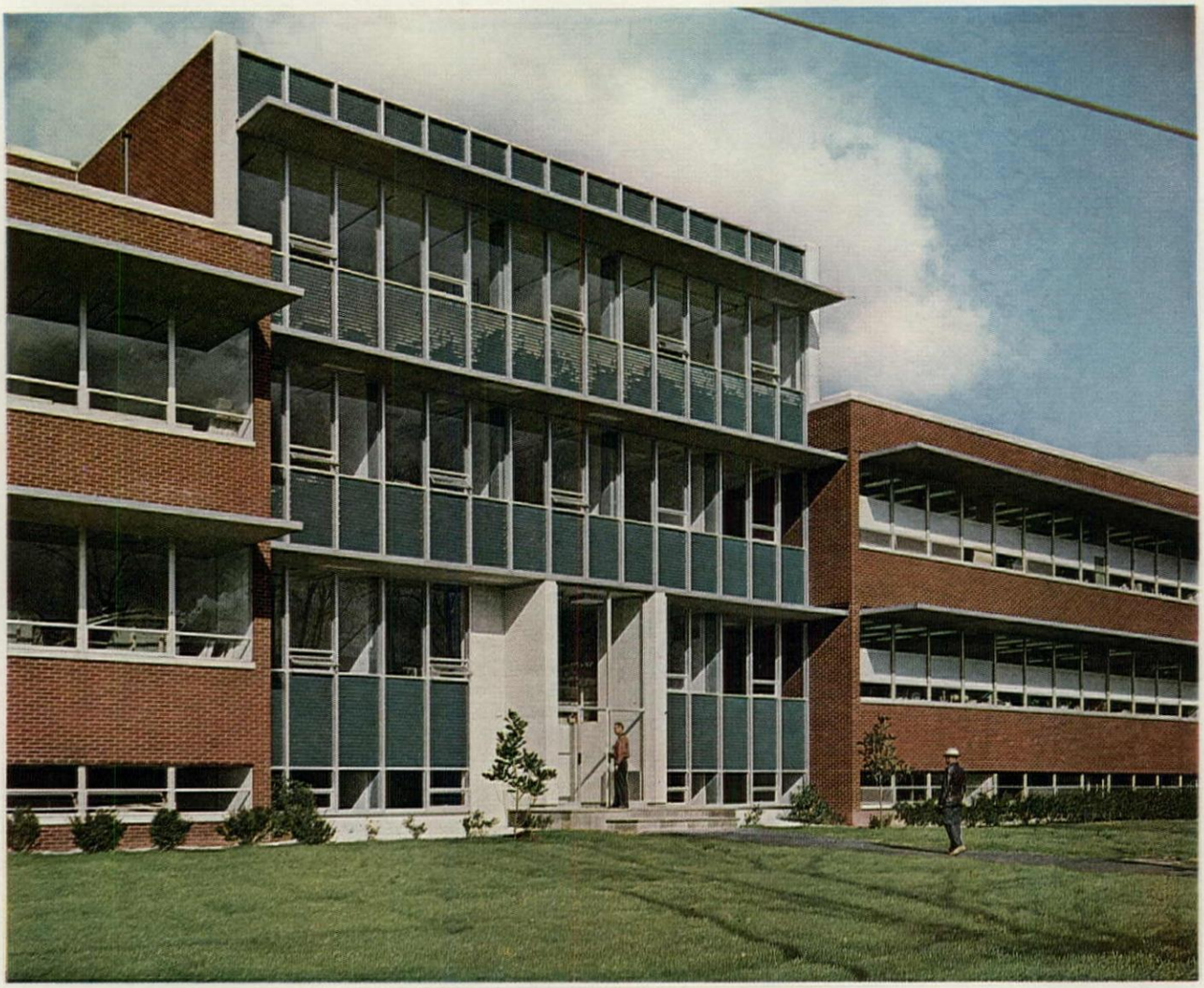
Photographed for Alcoa by Paul Wing

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Spandrel panels of textured green PLEXIGLAS *at Research and Engineering Building, Rohm & Haas Company plant, Bristol, Pa.*

New concept in spandrel panels

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For further details about spandrel faces of PLEXIGLAS —just one of the many uses of PLEXIGLAS as an architectural material—and the names of manufacturers, write for folder PL-459.

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Architects . . . cities . . . cathedrals

ARCHITECT'S YEAR BOOK (NO. 9). Edited by Trevor Dannatt. Published by Chemical Publishing Co., Inc., 212 Fifth Ave., New York 10, N.Y. 233 pp. 9¾" x 7½". $10.

When finally seen in retrospect, the Architects' Year Books may well turn out to have been a prime source of some of the most vital and significant architectural influences, idiosyncrasies, and thinking of the post-World War II years. Already a high favorite with the young architectural set, this series deserves a far larger circulation and reputation than it now possesses.

This latest volume has, among others: the Smithsons writing on Louis Kahn, Ernesto Rogers on the Brussels Fair in retrospect, Edgar Kaufman on centrality and symmetry in Wright's architecture, Ove Arup on the engineer and the architect. Plenty of Loos and Berlage is included for the vintage cribber.

THE FUTURE METROPOLIS. Edited by Lloyd Rodwin. Published by George Braziller, Inc., 215 Park Ave. S., New York 3, N.Y. 250 pp. 5½" x 8½". $5.

These 12 essays, reprinted from *Daedalus*, the Journal of the American Academy of Arts and Sciences, vary greatly in quality. Among the best are a comparison of changes in local political behavior in Britain and the U.S. as a response to metropolitan growth, by Edward C. Banfield; a discussion of cities as collections of choices and switchboards of interchange to facilitate the choices, by Karl W. Deutsch; and a historical review of the effects and shortcomings of Utopian thought, by Martin Meyerson.

THE FUTURE OF OUR CITIES. By Robert A. Futterman. Published by Doubleday & Co., 575 Madison Ave., New York, N.Y. 360 pp. 5¾" x 8½". With maps. $4.95.

Robert A. Futterman is a man worth listening to because he has made so much money. In a little over five years, this remarkable 33-year-old real estate developer has amassed over $80 million worth of properties in 26 cities.

In his analysis of topography, population growth, transportation, and a spate of other factors, Futterman appraises 19 cities as prospects for investment with a combination of a sociologist's professional air and a bookmaker's earnestness ("I'm pleased with Kansas City . . . one of the best bets of all American cities"). Futterman's condensed tip sheet might go like this: Odds-on favorites are Atlanta ("The boom radiates in all directions . . . and the coast is clear"), San Francisco ("Could become the city of the future"), and Norfolk, Va., where Futterman has just opened a new $7-million hotel. Longer shots include Philadelphia, Los Angeles, and Boston.

Of course, even the Futterman System has a catch, and he saves it for his epilogue. "Between this moment of writing and the time when you read this book, the cities will have changed," Futterman says. And he says it with the gravity of a man who has found a system that works—some of the time.

JEWISH ART. An illustrated history. Edited by Cecil Roth. Published by McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N.Y. 971 pp. 7½" x 10¾". Illus. $14.95.

A well-illustrated compendium of all Jewish art forms from early manuscript illumination to late Israeli painting, chiefly interesting for its chapters on classical and modern synagogues.

FRENCH CATHEDRALS. By Jean Bony. Photographs by Martin Hürlimann. Published by The Viking Press, Inc., 625 Madison Ave., New York 22, N.Y. 311 pp. 9" x 12¼". Illus. $12.

Reissue of a 1951 volume (with three new color plates and a new jacket) containing 199 magnificent black and white plates, principally of Notre Dame, Chartres, Reims, Amiens, and Bourges.

1400 GOVERNMENTS. The political economy of the New York metropolitan region. By Robert C. Wood. Published by Harvard University Press, Cambridge, Mass. 267 pp. 5½" x 8½". $5.75.

An apocalyptic view of urban chaos is glumly forecast in this final volume of the important New York Metropolitan Region Study. Professor Wood, a well-known planner and teacher, foresees a further extension of the scatteration and disorder afflicting the vast 22-county New York region unless the area's citizenry takes determined steps to strike at the heart of the problem—the uncoordinated pulling and hauling of the disparate 1,467 entities of government working to shape the area. Wood observes, with some detachment, that through pseudo-public devices such as the Metropolitan Regional Council future chaos could be curbed and the mistakes of the past corrected. But it is more likely, he feels, that the area's citizens will turn away from the basic problem, and simply move out where the crabgrass is greener.

continued on page 175











The Pius XII Memorial Library,
Saint Louis University, St. Louis, Missouri
Architect: Leo A. Daly Company, St. Louis.

How different Armstrong floors filled 3 special needs at The Pius XII Memorial Library

FOR QUIET AND COMFORT IN STACK AND STUDY AREAS: ARMSTRONG CORK TILE. The most resilient of all resilient floors, it makes sure footsteps are never disturbing. A special Armstrong plastic finish makes Cork Tile easier and less costly to maintain.

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Armstrong a b c ARCHITECT BUILDER CONSULTANT

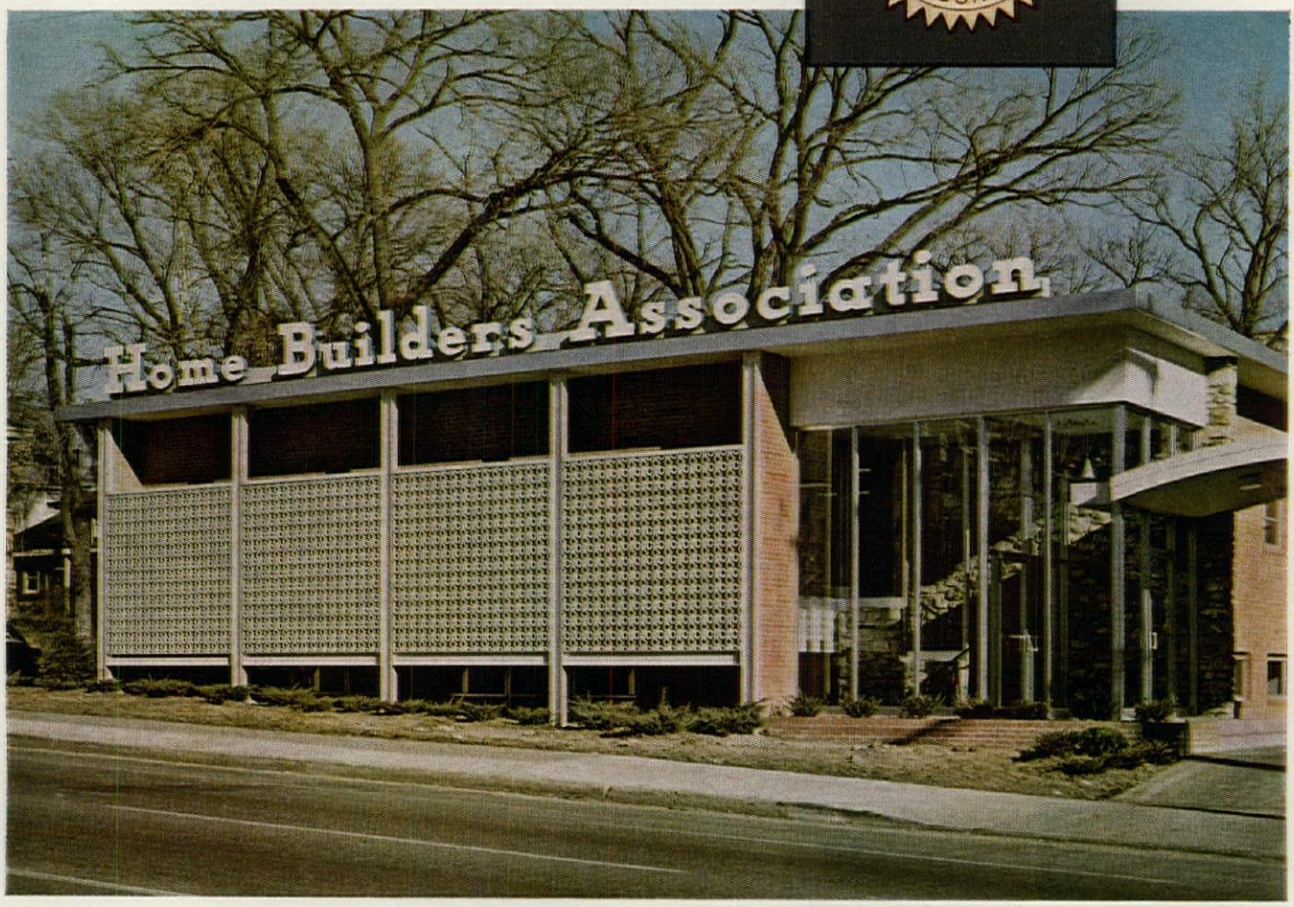
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CONTRACTOR: HIRAM ELLIOTT CONSTRUCTION CO.

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Gracefully rounded tile patterns stand in pleasing contrast to the bold strokes of this new Kansas City building. The tile is Arketex solarBAR — the design is one of four classic styles presented by this line — the color is moonlight aqua, selected from the four pastels in which solarBAR is available. The use of solarBAR to create a striking surface interest for this building — as well as to serve several practical purposes — resulted in its selection as an Arketex Gallery Design. SolarBAR belongs to the large family of structural facing tile products, made for you by Arketex.

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Read what Architect William B. Fullerton says on the next page.

(At Left) Administrative Offices
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KANSAS CITY, MISSOURI

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ARCHITECT:
William B. Fullerton
Fullerton and McCamis
Kansas City, Missouri

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Forum:

Your article "The Chase—portrait of a giant" (July '61) was one of the best of its kind that I have had the opportunity of reading.

W. A. Obers
Senior vice president
California Federal Savings
Los Angeles

Forum:

Your comprehensive report on "The Chase—portrait of a giant" sets a new standard for reporting on an architectural project in the round. Each of the articles covering the complexities of the project was extraordinary in its completeness, understanding, and depth.

NATHANIEL A. OWINGS
Architect
San Francisco

Forum:

Thank God for the Severance Building, the Federal Reserve Bank, and the others that relieve the monotony of the "tight-pants boys'" solution to a 60-story building. SOM has created another "stacked subway concourse" of nice, shiny materials that will hardly mellow with age. O Mies, did you ever think it would all come to this?

Please let's see some more of the greats of the past like Maybeck, Sullivan, Wright, Gaudi, Furness, or Wren if there is nothing new that is more inspirational than the Chase Manhattan.

ADOLF DE ROY MARK
Architect
Philadelphia

Forum:

May I add my congratulations on your outstanding coverage of the outstanding Chase Manhattan building.

JOHN C. PARKIN
Architect
Toronto

Forum:

The pressure upon Chase executives to patronize, appreciate, or at least take in, works of art selected by a company consultant is a warning to everyone who contemplates becoming a businessman in this day and age. It seems to me too that Mr. Ward Bennett has built into the new Chase the datedness of the future.

As regards the rebuilding of the St. Louis Post Office, why not keep the mansard roof? It is as landmarky as any other part of the place, and the idea of removing it (unless it has rotted, or something) suggests a qualm of "good taste" as 1961 interprets that transitory phenomenon.

WALTER C. KIDNEY
New York City

Forum:

Regarding the article on No. 1 Chase Manhattan Plaza, I think it was exceptionally well done and we, of course, appreciate the fine coverage you have given our project.

RAYMOND T. O'KEEFE
Vice president
The Chase Manhattan Bank
New York City

Forum:

An excellent presentation of a very remarkable project.

WALKER O. CAIN
Architect
Steinmann, Cain & White
New York

Forum:

I just wanted to indicate how much I enjoyed your article on the Chase Manhattan Bank: most interesting and well handled. I would like to see more projects handled with the same coverage and detail.

BRUCE M. WALKER
Architect
Spokane, Wash.

BATTLE OF STYLES

Forum:

Your strictures on *Architecture in America: a Battle of Styles* ("Books," June '61), come as a surprise.

We have attempted to put critical controversy over a few well-known buildings of the last 70 years in a perspective of changing and conflicting aims and values of architecture from classical antiquity to the present.

Our readers are invited to examine classical *principles*, not "tendencies," *real* not metaphorical orders, and to compare them objectively with some of the main theories and stylistic traits of modern architecture. We offer our readers the works of Sullivan, Wright, Gropius, Hitchcock and Johnson, Le Corbusier, Mumford, Saarinen, Zevi and others, in addition to Vitruvius, Wren, Alberti, Ruskin, et al., and we treat them with the only true form of respect a writer can desire—a willingness to examine their ideas seriously and to explore their implications.

WILLIAM A. COLES
Department of English
University of North Carolina
Chapel Hill

HENRY HOPE REED Jr.
Author and critic
New York City

ERRATUM

Williams & Burrows, not Williams & Burroughs, were the general contractors on the married student housing at the University of California (FORUM, *July '61*).

END



La Salle Street looking south from Chicago River

CHICAGO DISCOVERS that traffic congestion either ends at curbside or extends into building lobbies—*depending upon the kind of elevatoring used.* Why? *Because there is more to completely automatic elevatoring than simply leaving the operator out of the car!* Any elevator installation that fails to provide complete automation for all of the constantly changing, widely varying traffic patterns that occur throughout the day and night—*invites curtailed service, long waits and traffic congestion.* This applies in a like degree to the greatest skyscraper and the smallest commercial or institutional building. How do tenants and visitors react? After all, they are people. They react in a like manner to elevator service. And a building's reputation soon reflects their reactions. The mark of a CLASS "A" building—*large or small*—is completely automatic AUTOTRONIC® elevatoring. It accurately predicts and delivers a magnificent performance. Since 1950, more than 1,100 new and modernized buildings across the United States and Canada have contracted for AUTOTRONIC elevatoring by OTIS—the world's finest!

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FIRE...

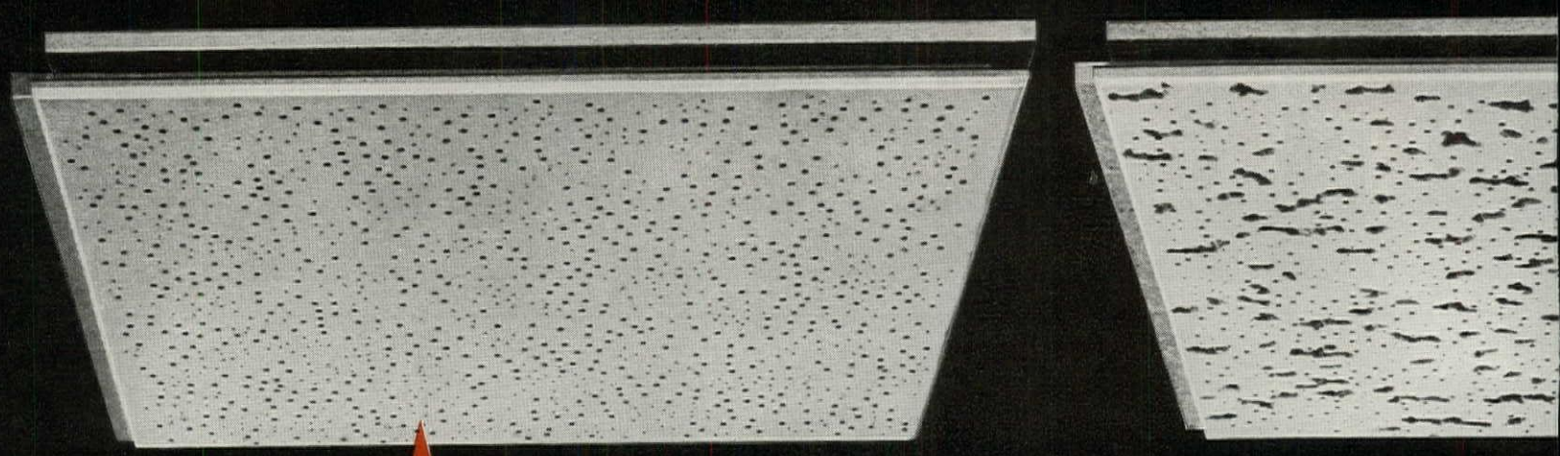


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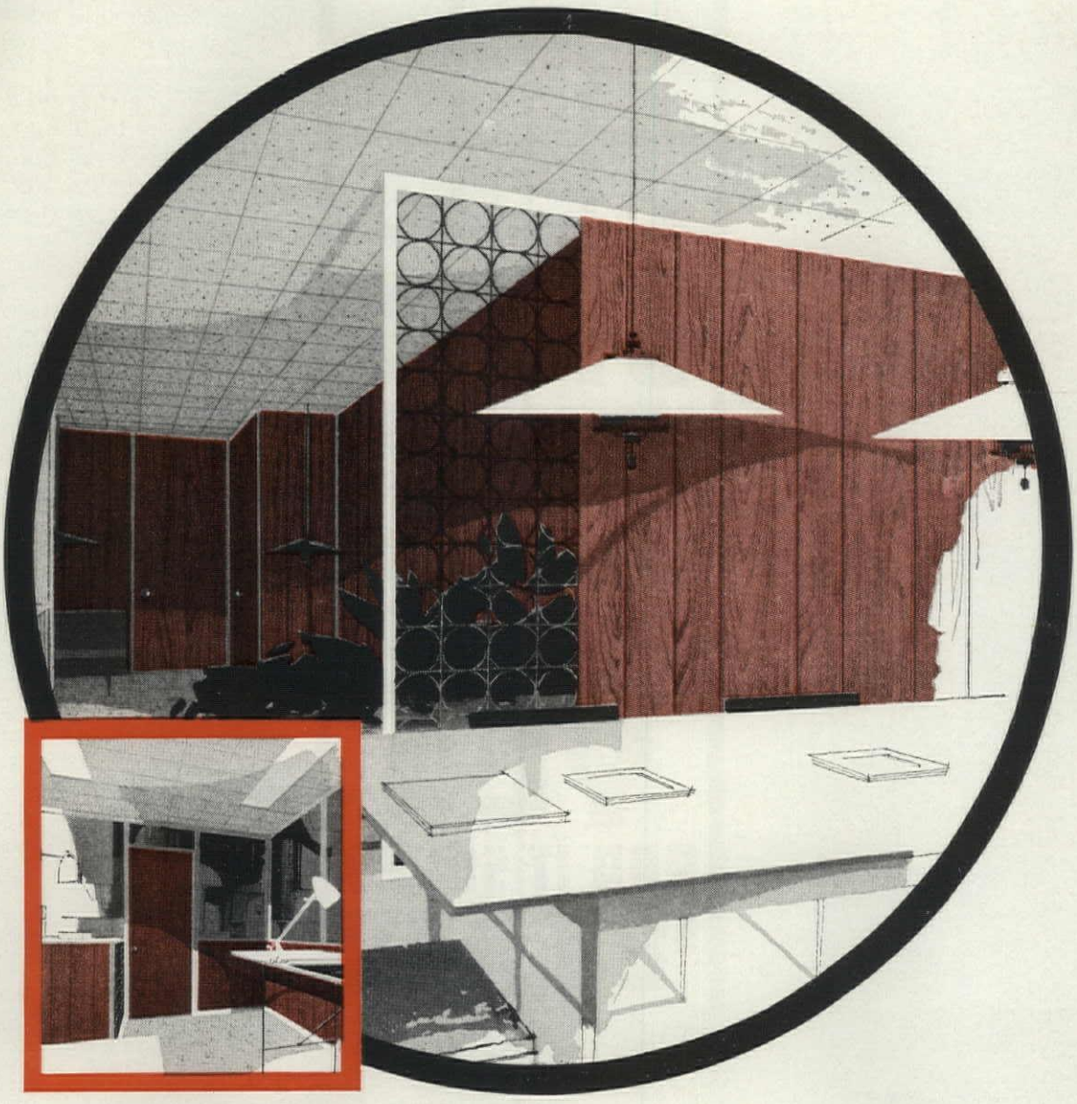
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BUILDING PRODUCTS

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For the builders of new Hinman House in Evanston, Illinois, steel offered exceptional flexibility of design and a direct saving of $80,000 in construction costs. The 8-story building has 80 deluxe apartments. Typical floors are 68′ x 165′ and cubic footage totals 1,020,000.

"We saved in many ways," says Mr. Roy Schoenbrod, the architect. "Designed and bid both for steel and for concrete, the steel bid proved to be decidedly less expensive. What's more, during construction we observed that steel construction made the job easier for the pipe trades such as heating, air-conditioning, conduits and plumbing. Work went faster and labor costs were reduced considerably. This was our first experience with steel on a building of this size, but now that we've seen what it can do, we'll think of steel first from now on."

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STEEL CONSTRUCTION OFFERS design flexibility

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THE CATHEDRAL BUILDERS. By Jean Gimpel. Translated by Carl F. Barnes Jr. Published by Grove Press, Inc., 64 University Pl., New York, N.Y. 192 pp. 4½" x 7". Illus. $1.35.

A thorough, probing study in paperback form, backed up by profuse illustrations, of that privileged moment in history when man's architectural genius swept Europe in the cathedral-building rage.

ENGLISH ABBEYS AND PRIORIES. By Olive Cook and Edwin Smith. A Studio Book published by The Viking Press, Inc., 625 Madison Ave., New York 22, N.Y. 136 pp. 9" x 12". Illus. $12.

The old English architecture shown in this book is reticent but reassuring. It demonstrates that architectural statements, even those ignored for decades at a time, can still endure (in the English countryside, at any rate), waiting to cast their spell over us again. In these fine piles of masonry certainly can be found a hint of the force and permanency some architects today are trying to restore to their designs. The text by Olive Cook is good; the photographs by Edwin Smith are excellent, and are properly reproduced by a fine British printer.

THE SCOTTISH CASTLE. By Steward Cruden. Published by Thomas Nelson & Sons, 19 E. 47th St., New York 17, N.Y. 272 pp. 6¾" x 9½". Illus. $10.

Plans, photographs, and commentary about the great Scottish castles, beginning with the Broch of Mousa, a formidable round tower surviving from the first century, down to the fortifications built by George I and Oliver Cromwell.

BUILDING FOR THE AGED. Edited by F. H. J. Nierstrasz. Published by D. Van Nostrand Co., Inc., Princeton, N.J. 187 pp, 8¼" x 12". Illus. $16.50.

Dutch examples of planning for pensioners' dwellings, old-age centers, nursing homes and hospital geriatrics facilities, together with an exhaustive compilation of standards and discussion of principles; much of the material is as applicable to the U.S. as to Holland.

LE CORBUSIER TALKS WITH STUDENTS. Translated from the French by Pierre Chase. Published by The Orion Press, 116 E. 19th St., New York, N. Y. 87 pp. $3.50.

Ruminations of a great man who thinks and speaks as vividly as he draws.

SIMPLIFIED ENGINEERING FOR ARCHITECTS AND BUILDERS. By Harry Parker. Published by John Wiley & Sons, Inc., 440 Park Ave. S., New York 16, N.Y. 325 pp. 5¼" x 8". $7.

The third edition updating a text first published in 1938, covering principles of mechanics; steel, timber, and concrete construction; and roof trusses.

MODERN PHYSICS BUILDINGS. By R. Ronald Palmer and William Maxwell Rice. Reinhold Publishing Corp., 430 Park Ave., New York, N.Y. 324 pp. 10½" x 8½". Illus. $13.50.

Another of the Reinhold Progressive Architecture series. Conventional data on the subject.

THE DESIGN OF RESEARCH LABORATORIES. By the Division for Architectural Studies of the Nuffield Foundation. Published by the Oxford University Press, Amen House, London, E.C. 4, England. 211 pp. 8½" x 12". Illus. 45s.

Applied human engineering in action. Of general and particular interest and profound implication.

PRESTRESSED CONCRETE. By James R. Libby. Published by the Ronald Press Co., 15 E. 26th St., New York, 10, N.Y. 468 pp. 6¼" x 9¼". Illus. $12.50.

Comprehensive treatment with emphasis on design.

PRACTICAL DESIGN OF STRUCTURAL MEMBERS. By Thomas A. Lucy. Published by F. W. Dodge Corp., 119 W. 40th St., New York, N.Y. 432 pp. 10½" x 7¼". Illus. $12.

Tables, diagrams, charts, etc.: a handbook of miscellaneous material developed to meet structural engineering design problems.

PRESTRESSED CONCRETE SIMPLY EXPLAINED. By H. Kaylor. Published by Contractors Record Ltd., London and John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N.Y. 158 pp. 5¾" x 8½". Illus. $5.25.

Principle to application to potential in a concise and understandable nutshell.

OPEN STAGE THEATRE CHECK LIST. Published by the Greater New York Chapter of ANTA's Board of Standards and Planning for the Living Theater. 34 pp. 9" x 10½". Illus. $2.50.

A committee of theater specialists—practicing consultants, architects, and workers in the professional theater—approach the problems connected with the building of new kinds of theaters.

AUDITORIUMS AND ARENAS. By Francis R. Deering, Don Jewell, and Lindsley C. Lueddeke. Published by Public Administration Service, 1313 E. 60th St., Chicago 37, Ill. 86 pp. 8½" x 11". Illus. Paper-bound. $5.

CHICAGO HERITAGE COMMITTEE CARDS. Not a book, but worthy of review, is this set of ten 4" x 6" black and white postcards showing over-all or detail views of some of Chicago's architectural landmarks: the Stock Exchange, Reliance, Monadnock, Republic, and Cable buildings; Garrick Theater, The Auditorium, Carson, Pirie, Scott & Co.; and Wright's Robie House and Universalist Church. First of a planned series, the set is available at $1 from the nonprofit Chicago Heritage Committee, P.O. Box 4513, Chicago 80, Ill. Proceeds will be used to finance further publications on Chicago architecture.

END

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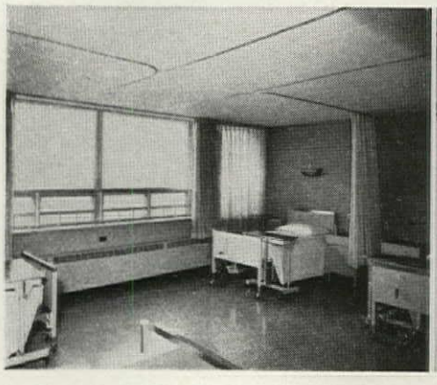
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Contractor: Morrison, Inc. Hammond, Ind.

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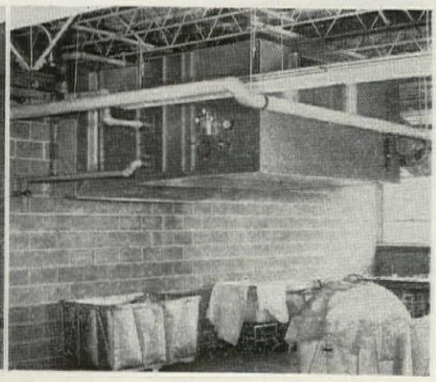
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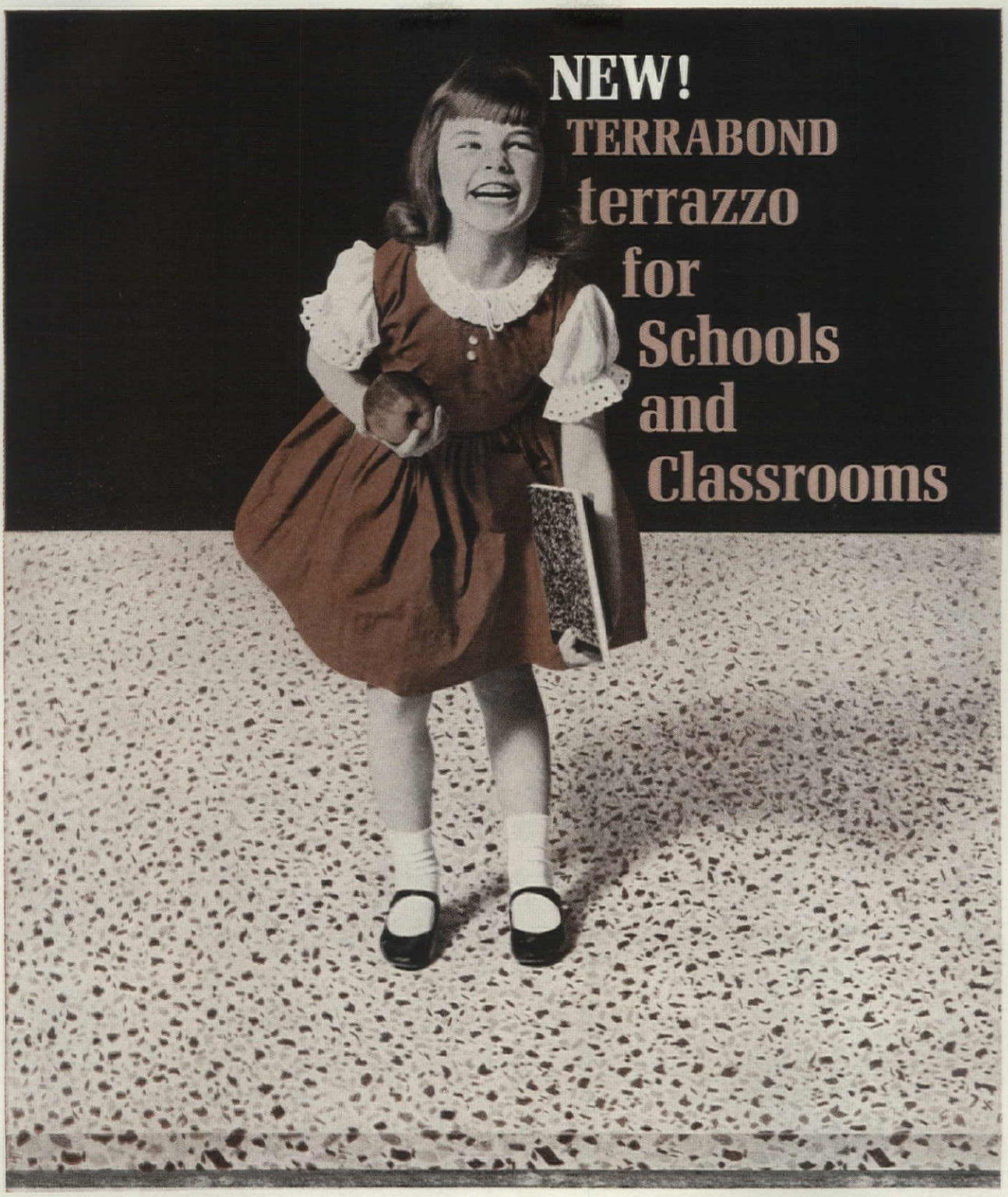
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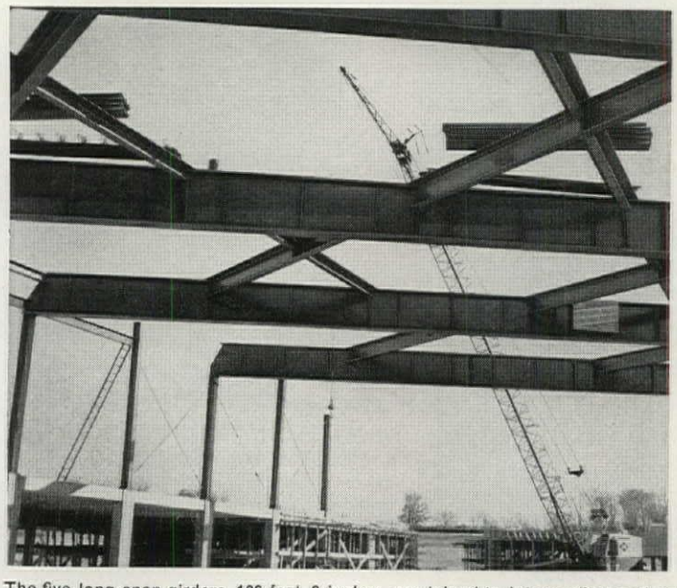
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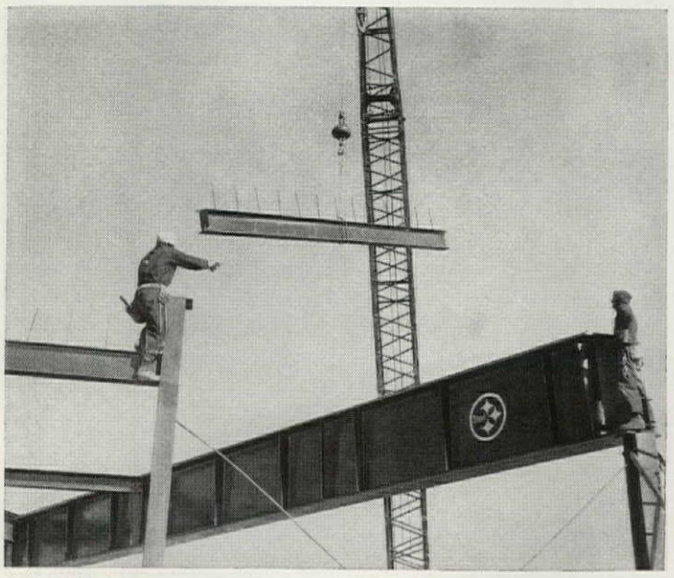
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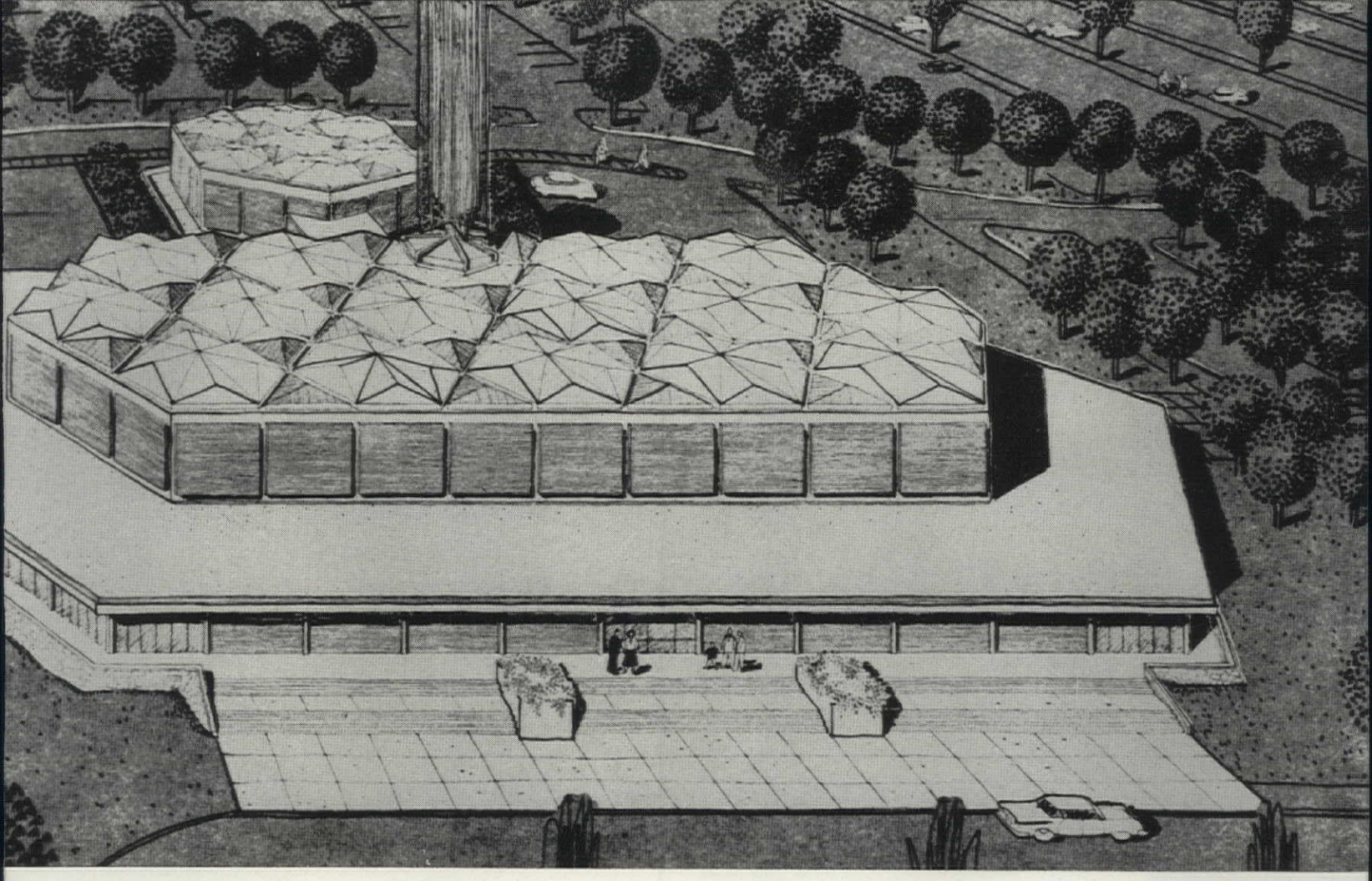
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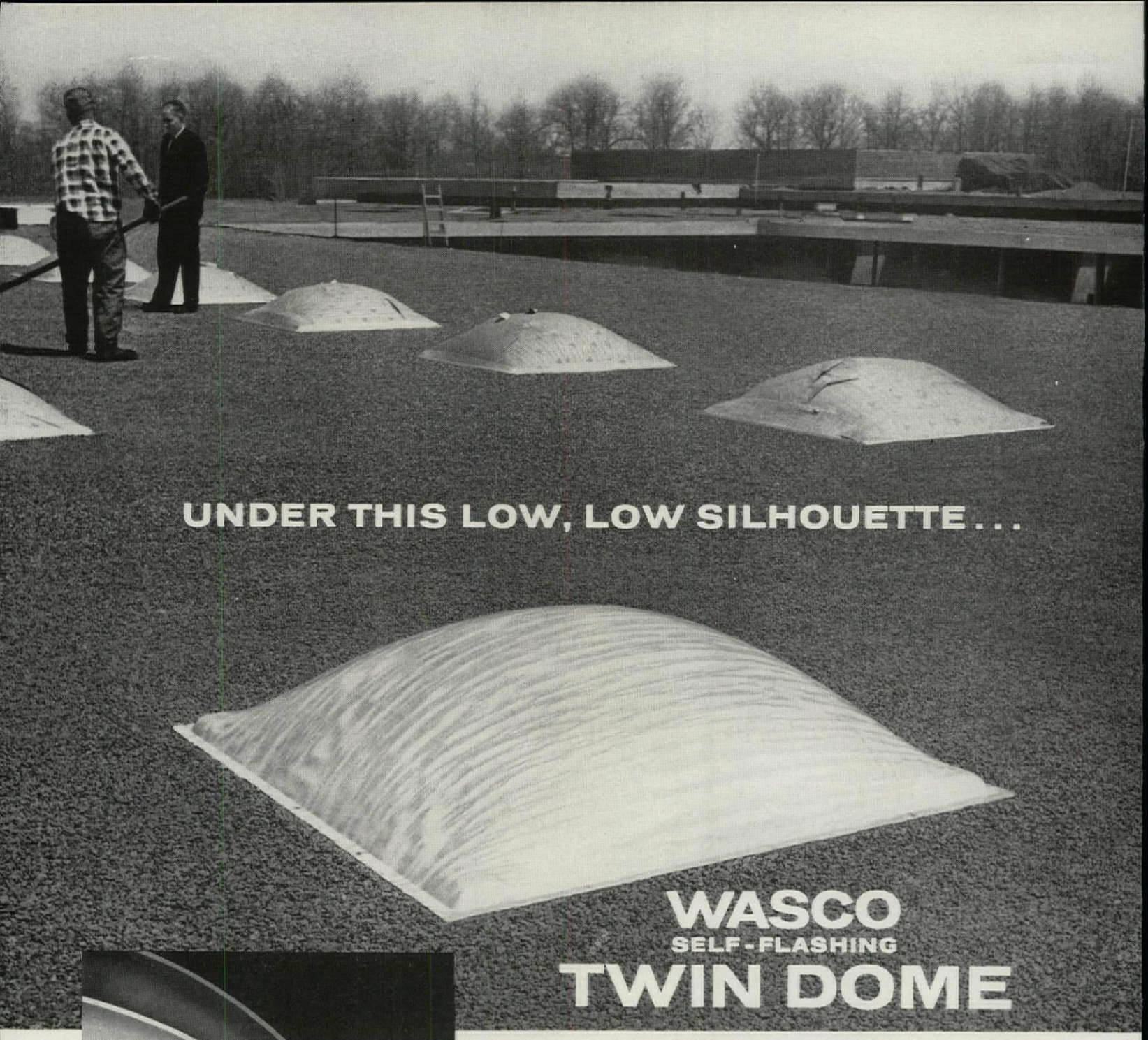
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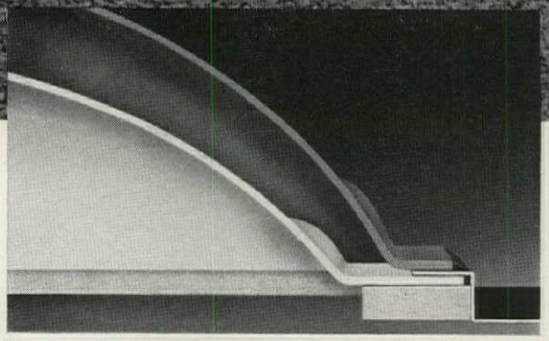
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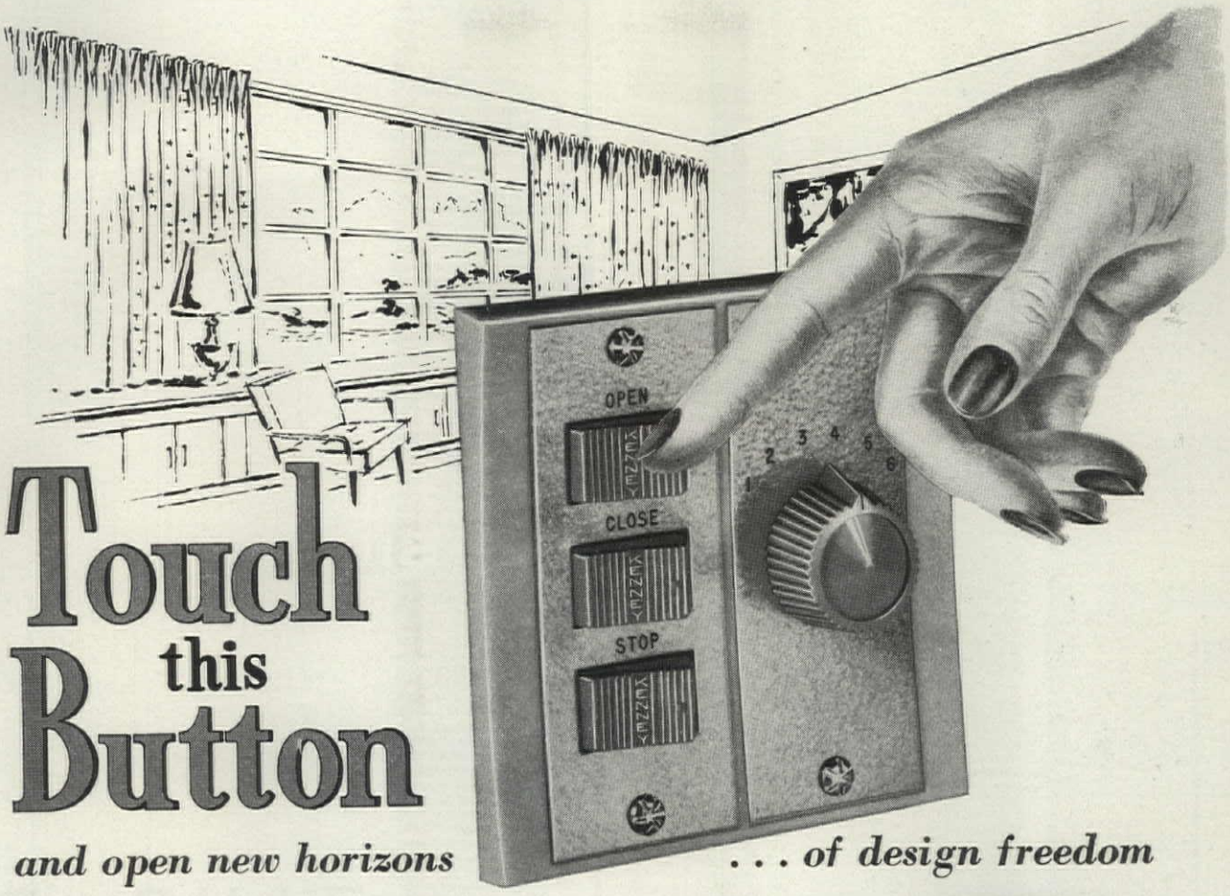
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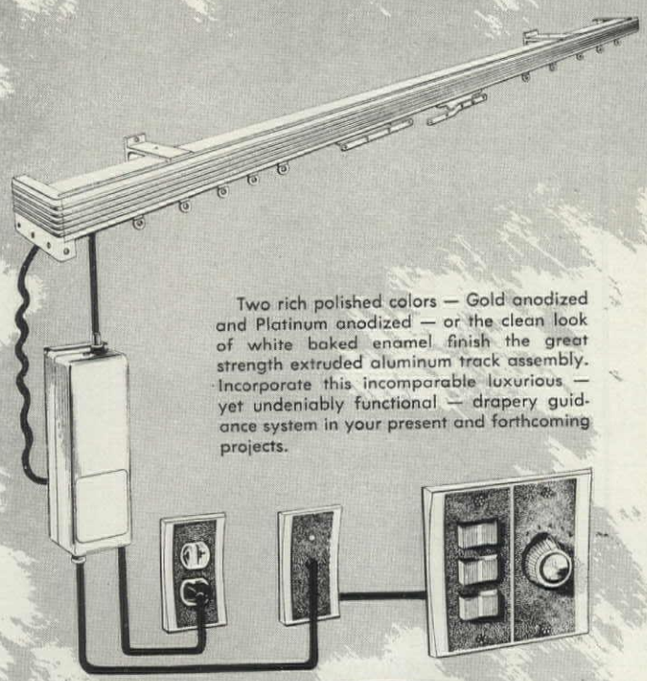
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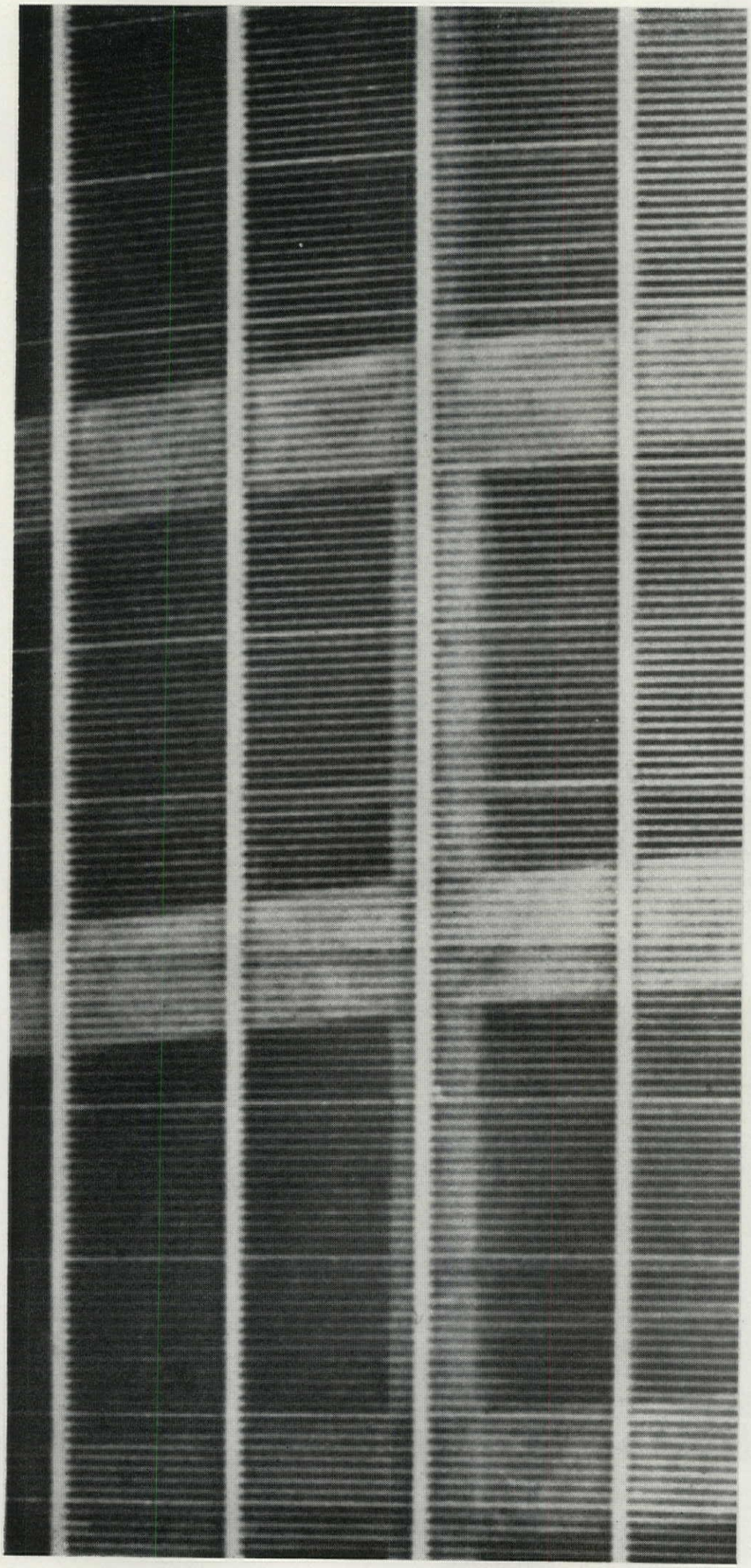
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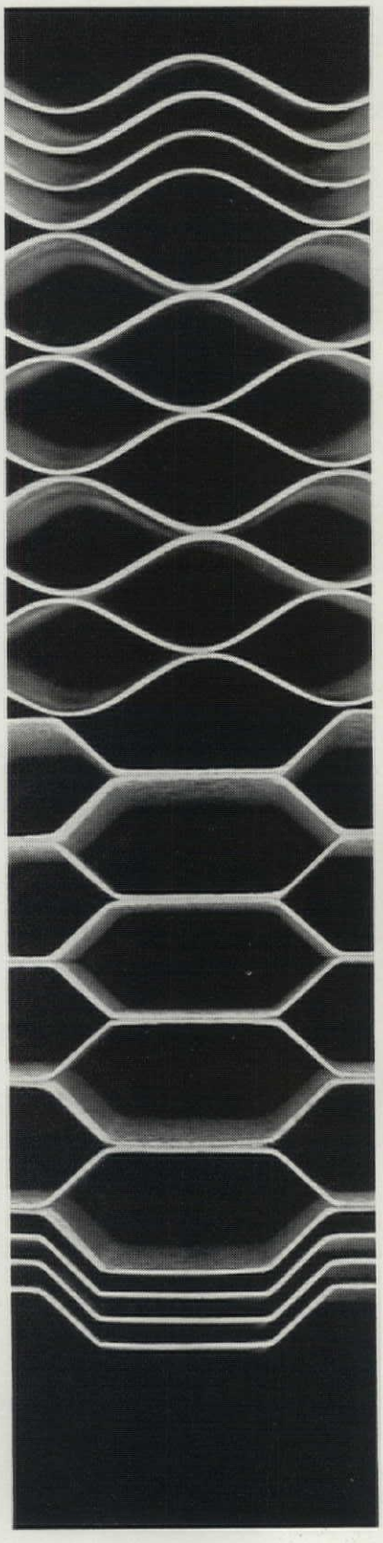
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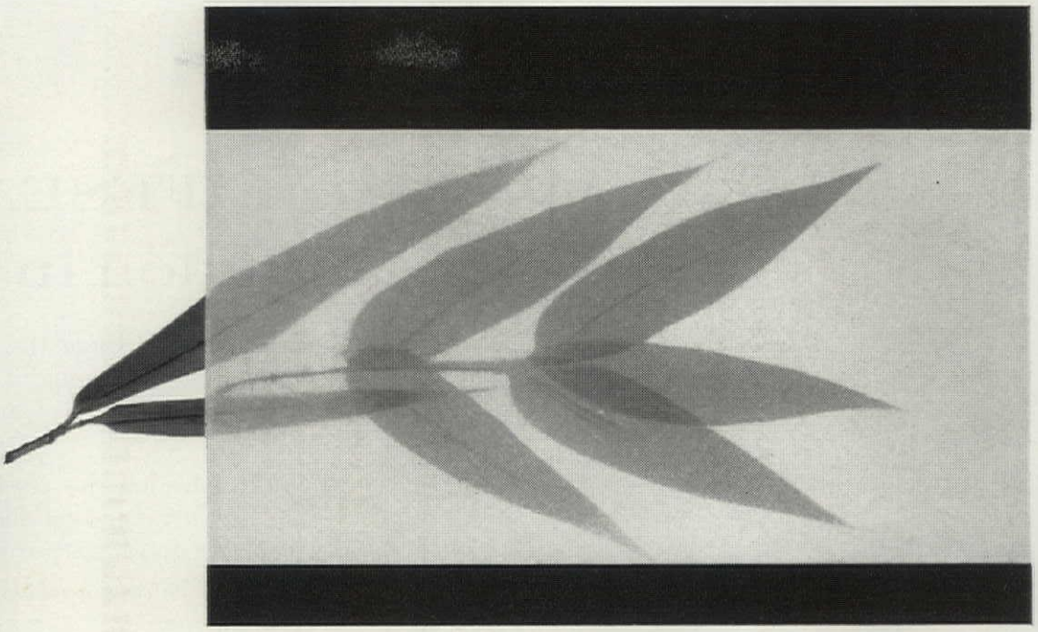
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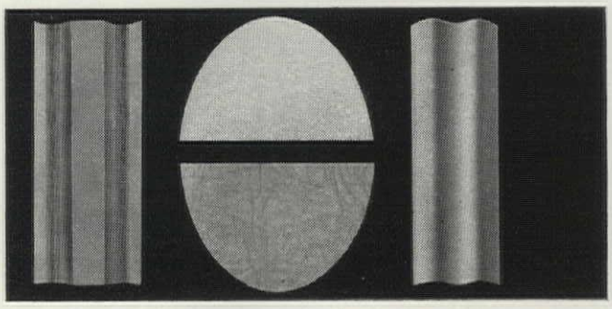
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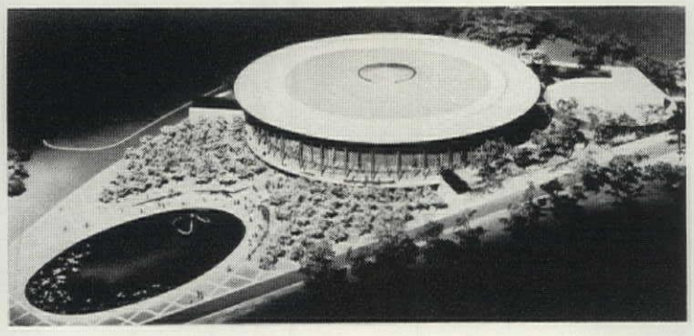




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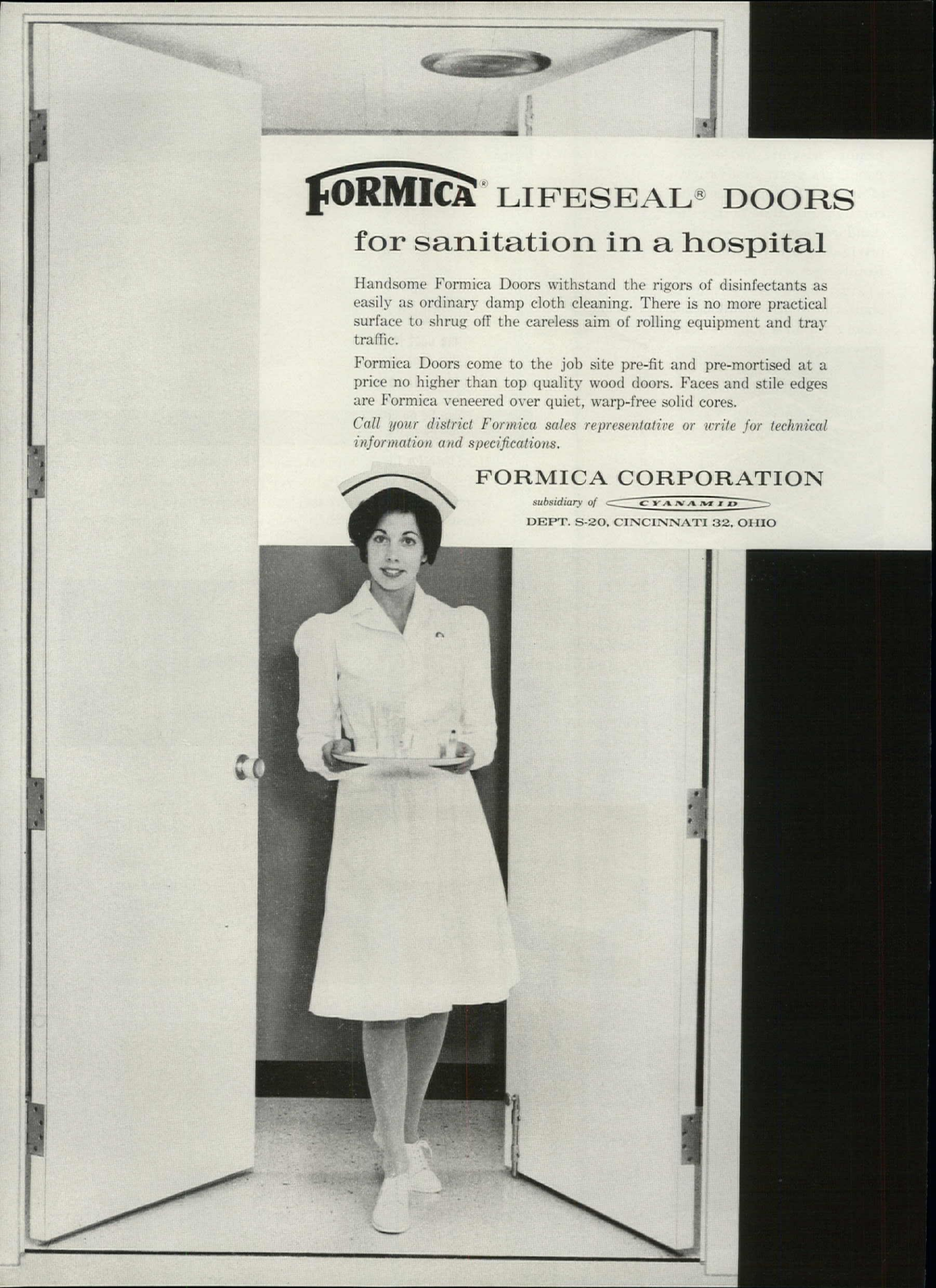
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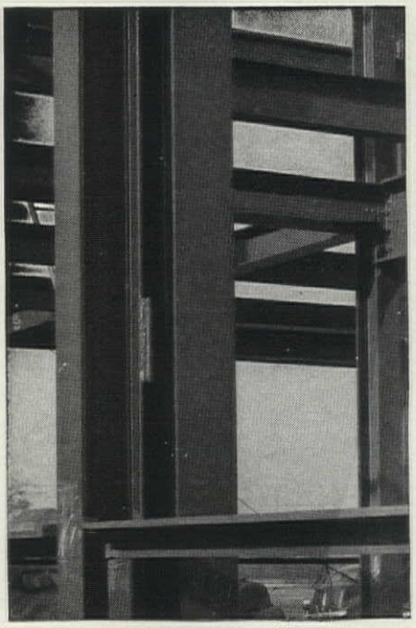
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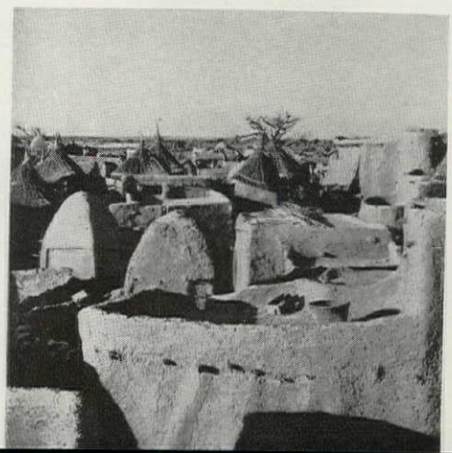
square kilometers. The gigantic perpendicular cliffs of Bandiagara cut diagonally across the entire territory from northeast to southwest. The transition between the plateau on the northwest and the vast plain of Gondo 200 to 300 miles below to the southeast is so emphatic that this extraordinary topographical feature has deeply affected the life and history of the people. The climate lies exactly halfway between that of the desert to the north and that of the tropical forest to the south: a long, completely dry hot season, a short, slightly less hot rainy season.

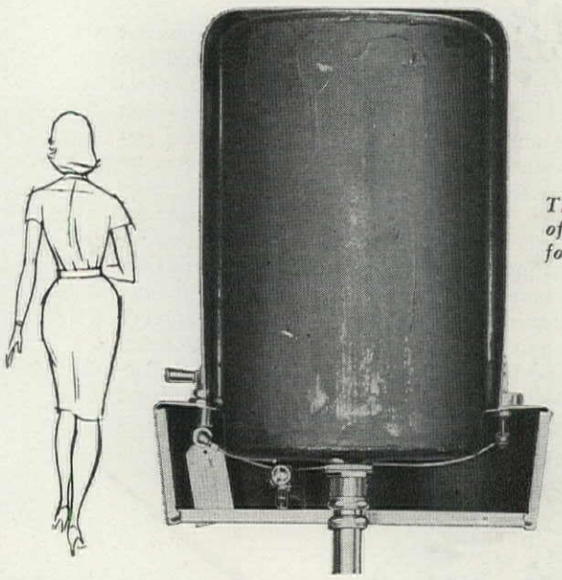
That the Dogon people have managed to resist the impact of the Islamic world which completely surrounds them is due mainly to their relaxed philosophical and metaphysical approach to all religious, economical, and social matters. The specific way the Dogon people build their houses, granaries, and villages collectively and cultivate their meager arable land reflects the truly wonderful spiritual equipoise which they have attained in every way. Individual and collective activities and material and spiritual functions interact so harmoniously, so graciously, that anthropologists can offer no existing parallel.

In accordance with the topographical nature of the territory there are two principal village types: the plateau type (upper and lower Ogol, etc.) and the cliff-debris type. The former are built on elevated tablelike masses of rock from edge to edge and are very compact; the latter, in a long chain of villages built on the steep slope of fallen rocks along the foot of the cliffs of Bandiagara from northeast to southwest (Yugo Na, Yugo Doguru, Banani, etc.).

The natural excellence of the villages, their relation to each other, and the total setting are perhaps most clearly revealed during a Dama, a masked dance which terminates a period of mourning. The entire village all at once forms the stage for a highly complex ritual lasting several days and nights, in which each inhabitant participates in one way or another. A miracle of urban choreography! Each house, street, square, object, gesture, sound, and song is significant within the vast framework of an act that virtually coincides with the material and spiritual reality of the participating community.

The Dogon village constitutes the counterform of this reality. What we can learn from them is a planning prerogative: if society has no real specific form, it will fail to build its own counterform, i.e., fail to build a real urban environment, since form and counterform sustain each other reciprocally. If they do not, neither will survive. Are we going to catch up with the Dogon people before finally there is nothing left to catch up with? This is the challenge to contemporary urbanism. END





This is the back of Haws drinking fountain model 73

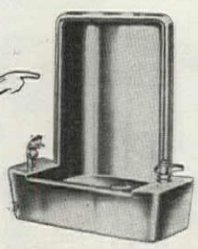
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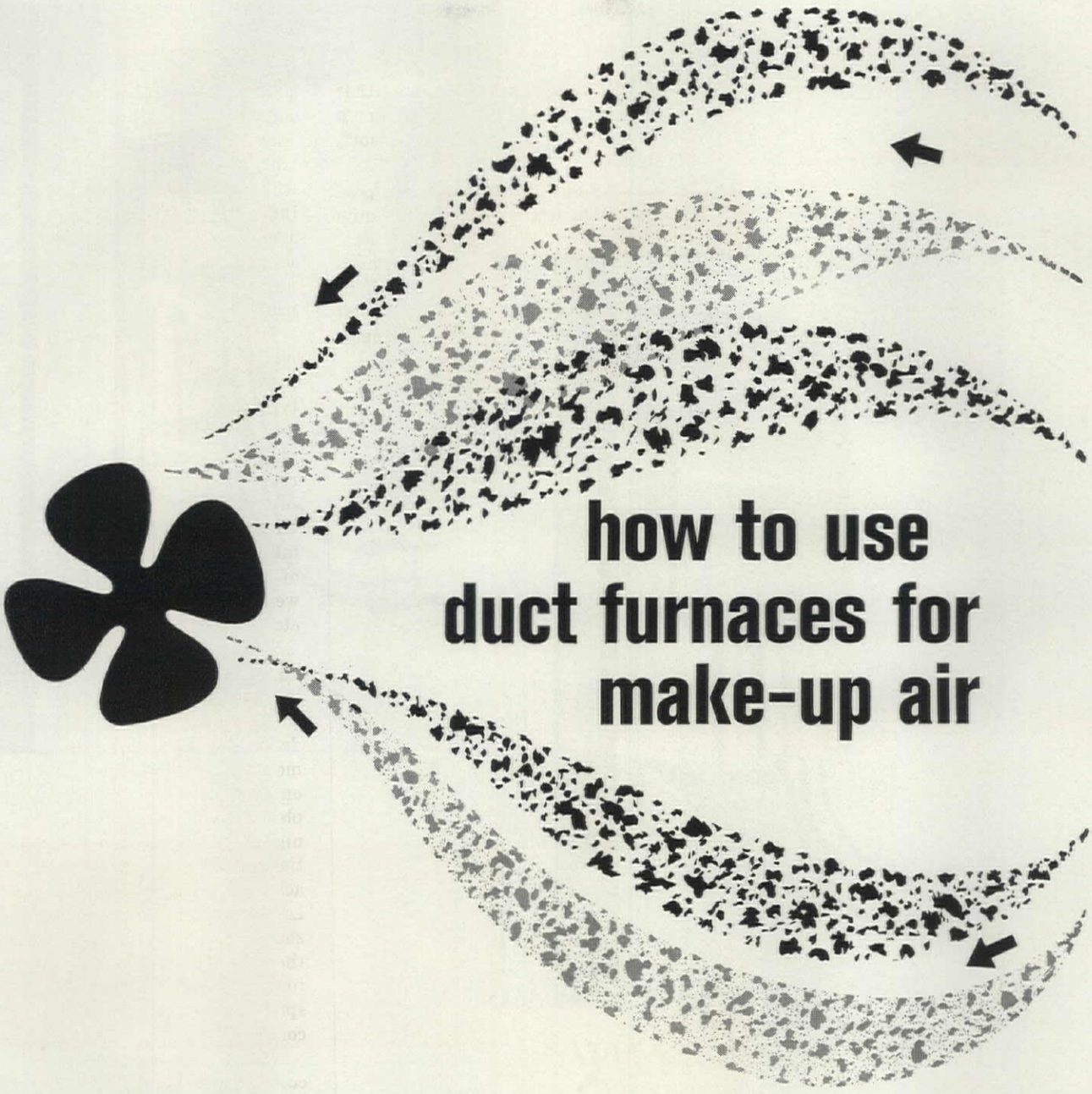


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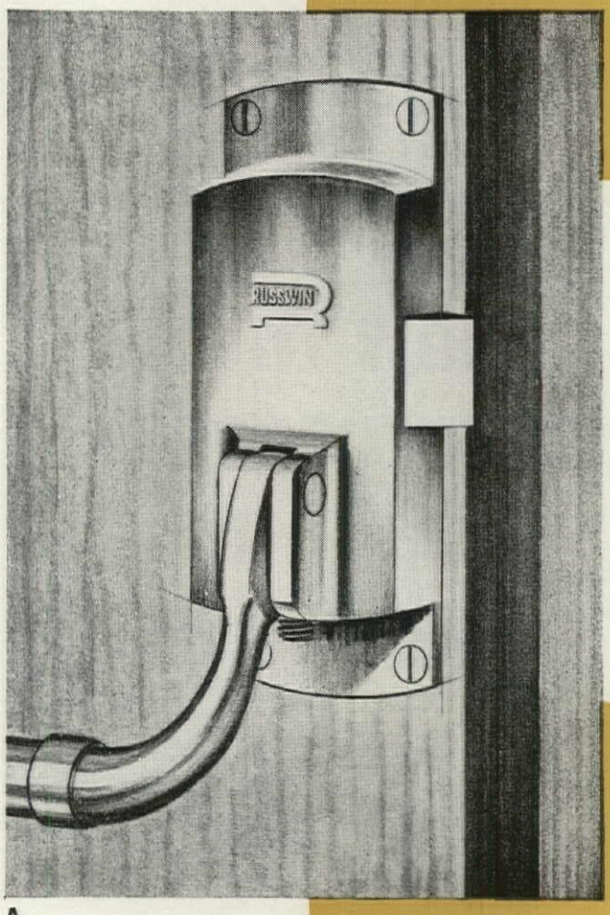
REZNOR MANUFACTURING COMPANY
Dept. AF-9, Mercer, Pennsylvania
Send me a copy of "What to Consider in Designing Make-Up Air Systems."

name_____ title_____

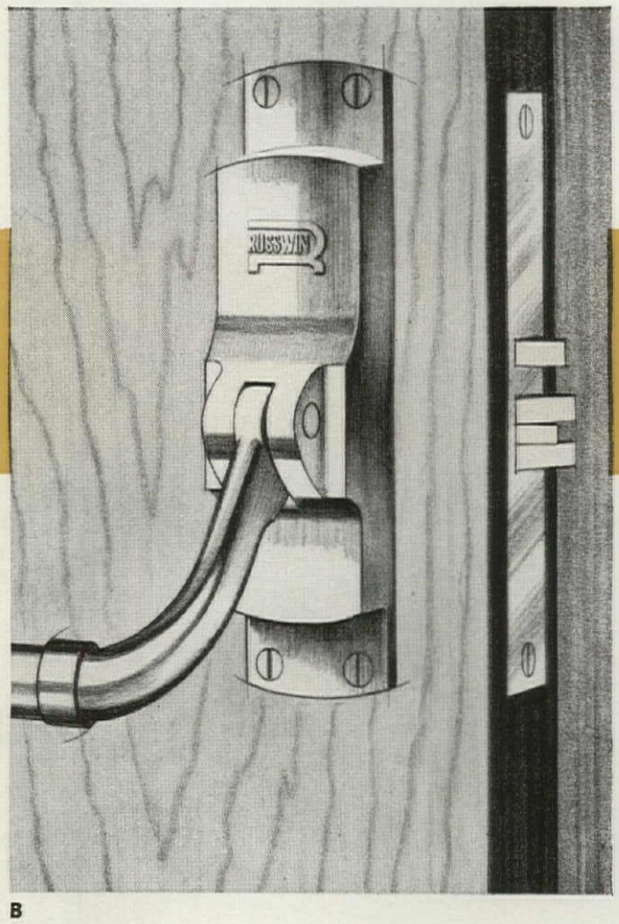
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city_____ state_____



A



B

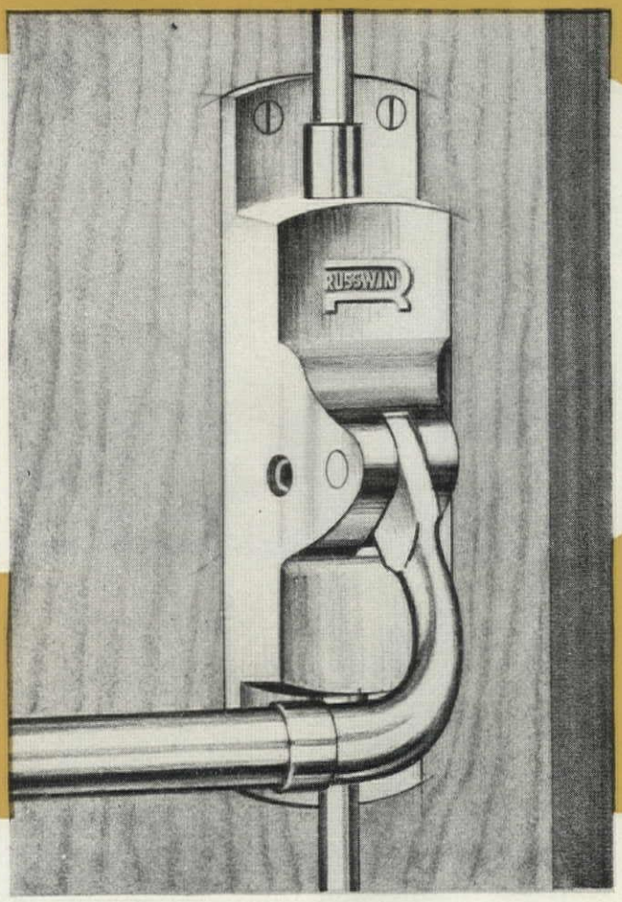
the russwin "R" . . . what it

A–Russwin Rim Exit Bolts— Heavy-duty surface type. Easier to install. Only three moving parts. Ideal for existing single or (with Russwin removable mullion) pairs of doors. UL listed for casualty.

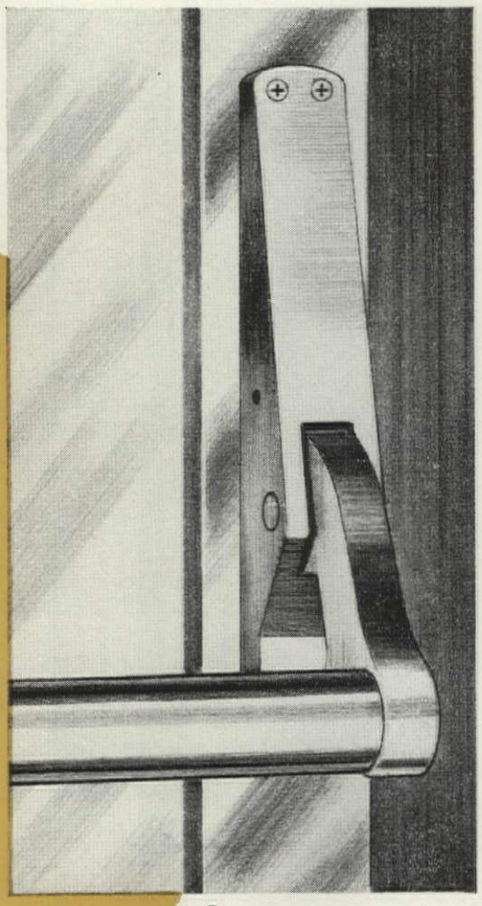
B–Russwin Mortise Exit Bolts — Heavy-duty type. Exclusive "touch-and-go" rotary action; push-or-pull crossbar. Single doors or pairs of doors. Available UL listed for B, C, D, E labeled single doors.

C–Russwin Vertical Exit Bolts — Heavy-duty, maximum security type. Safety-engineered with push-or-pull crossbar action. Independent bottom latch action. For single doors or pairs of doors.

D–Russwin Concealed Exit Bolt — New. Fits 99% of all metal doors — narrow-stile aluminum, hollow metal. Unique telescoping vertical rod. Completely reversible. For single doors, or pairs of doors.



C

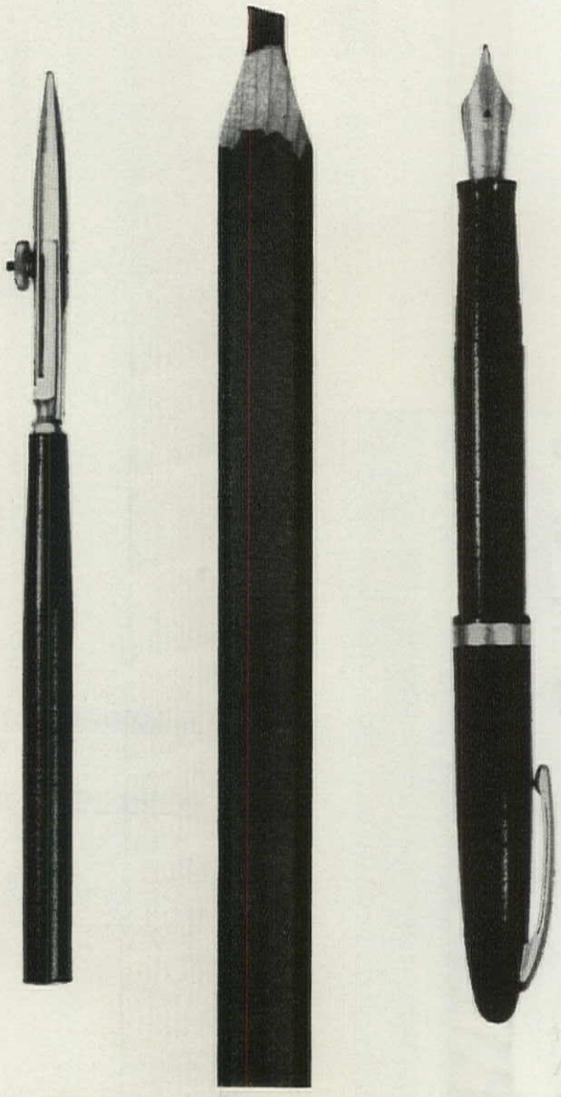


D

means on fire exit bolts

The Russwin "R" assures (1) a complete line of fire exit bolts . . . types and functions for any door; (2) superb quality for long, trouble-free, heavy-duty service; (3) Russwin "safety engineering" for complete dependability; (4) smart, functional styling. *Whatever* your doorware needs — exit bolts to door closers — *look to Russwin.* Russell & Erwin Division, The American Hardware Corporation, New Britain, Connecticut.

RUSSWIN



IT TAKES ALL THREE TO SIGN YOUR ORDER

Producing a building is seldom a one-man, or a one-pen, operation. It takes several distinctive kinds of knowledge. The architect-engineer's knowledge of his art and science. The contractor's knowledge of construction. The client's knowledge of his needs. And the knowledge of all three concerning the function, appearance and reputation of building materials and equipment.

It takes all this—and a good deal more. To call it "teamwork" is to use words loosely, for often the meetings of client and contractor and architect resemble anything but teamwork. Yet the agreements they hammer out together are what get buildings built—or rebuilt—and what get building products and equipment sold.

Architectural FORUM alone serves the joint interests of all three—as well as the individual interests of each one; FORUM alone sees and explores and reports all phases of the huge and complex industry that is building. And in doing so, FORUM is essentially different: it brings your advertising directly into the three-way discussions where product decisions are made... and orders are signed.*

*FORUM's circulation is the biggest in its field (62,000—including architects, contractors and clients) and has been steadily growing for 9 years. Fifty per cent larger than that of the next magazine, it's all *paid* circulation!

FORUM: ESSENTIALLY DIFFERENT for readers... and for advertisers

WHO LOOKS AT THE ROOF?

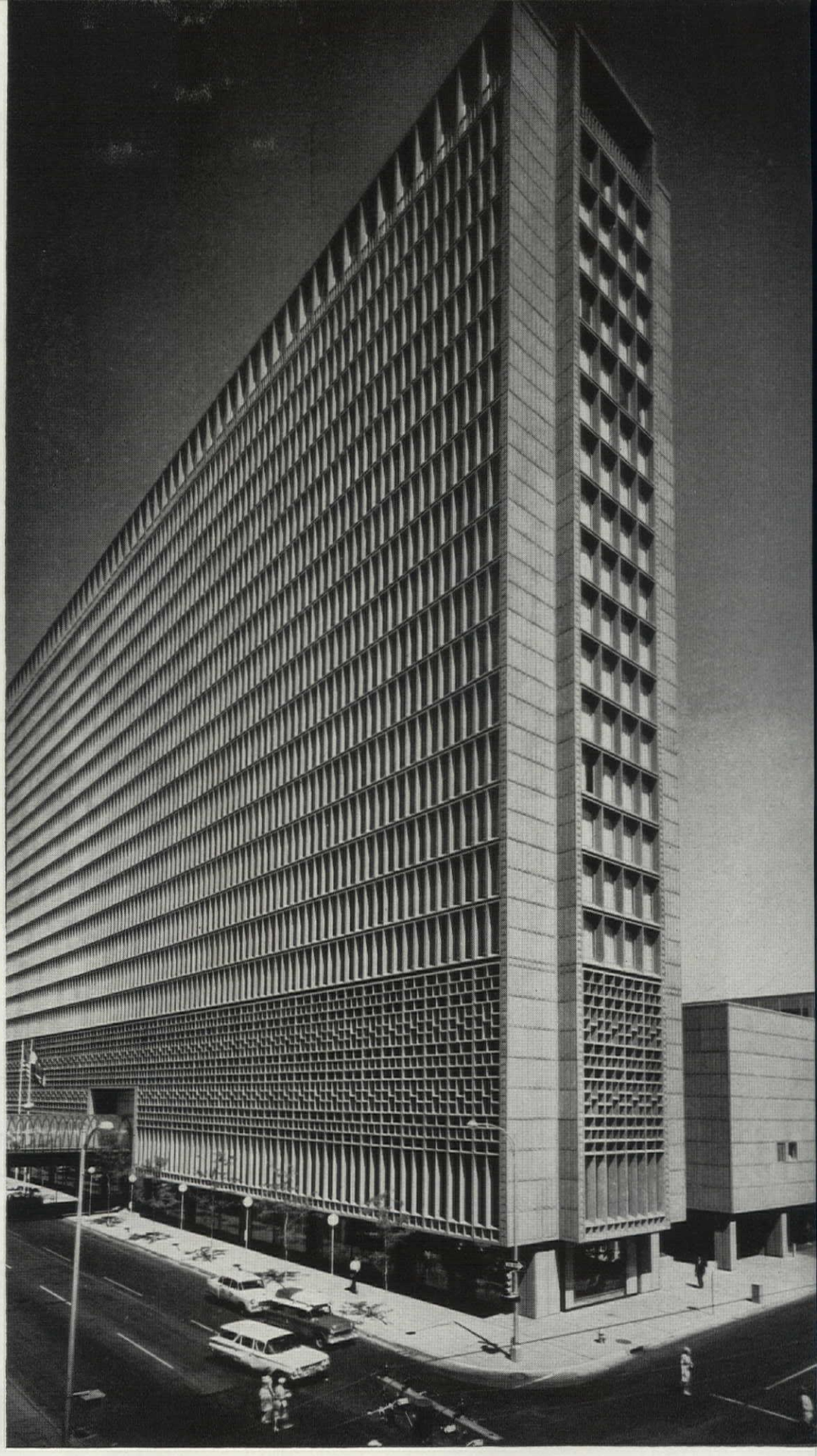
No one has to look at the roof of this award-winning building (AIA Award of Merit, 1961), because a Ruberoid roof was applied.

A Ruberoid roof, expertly built-up with Ruberoid special roofing bitumen, by an approved Ruberoid roofer, assures years of weather-tight, maintenance-free service.

Look up to the finest in roofing on your next project. Specify Ruberoid!

Be sure to get your copy of the industry's most complete built-up roofing specification manual. Write: The RUBEROID Co., 733 Third Avenue, New York 17, N. Y.

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DENVER-HILTON HOTEL, DENVER, COLORADO
Architect: I. M. Pei and Associates
Roofing Contractor: Asphalt Products Company
Ruberoid Specifications: Special Roofing Bitumen, Asphalt Felt, gravel surface



Presenting the beauty and durability of VINYL in the newest Ebco water cooler

Oasis On-A-Wall, 7 and 13 GPH capacities

Only the Ebco On-A-Wall has mar-resistant vinyl bonded permanently to steel for lasting beauty. Unlike metal or painted water coolers, the rich Silver Spice tone adds warmth to any surroundings. An anodized aluminum grille accents the On-A-Wall's natural beauty.

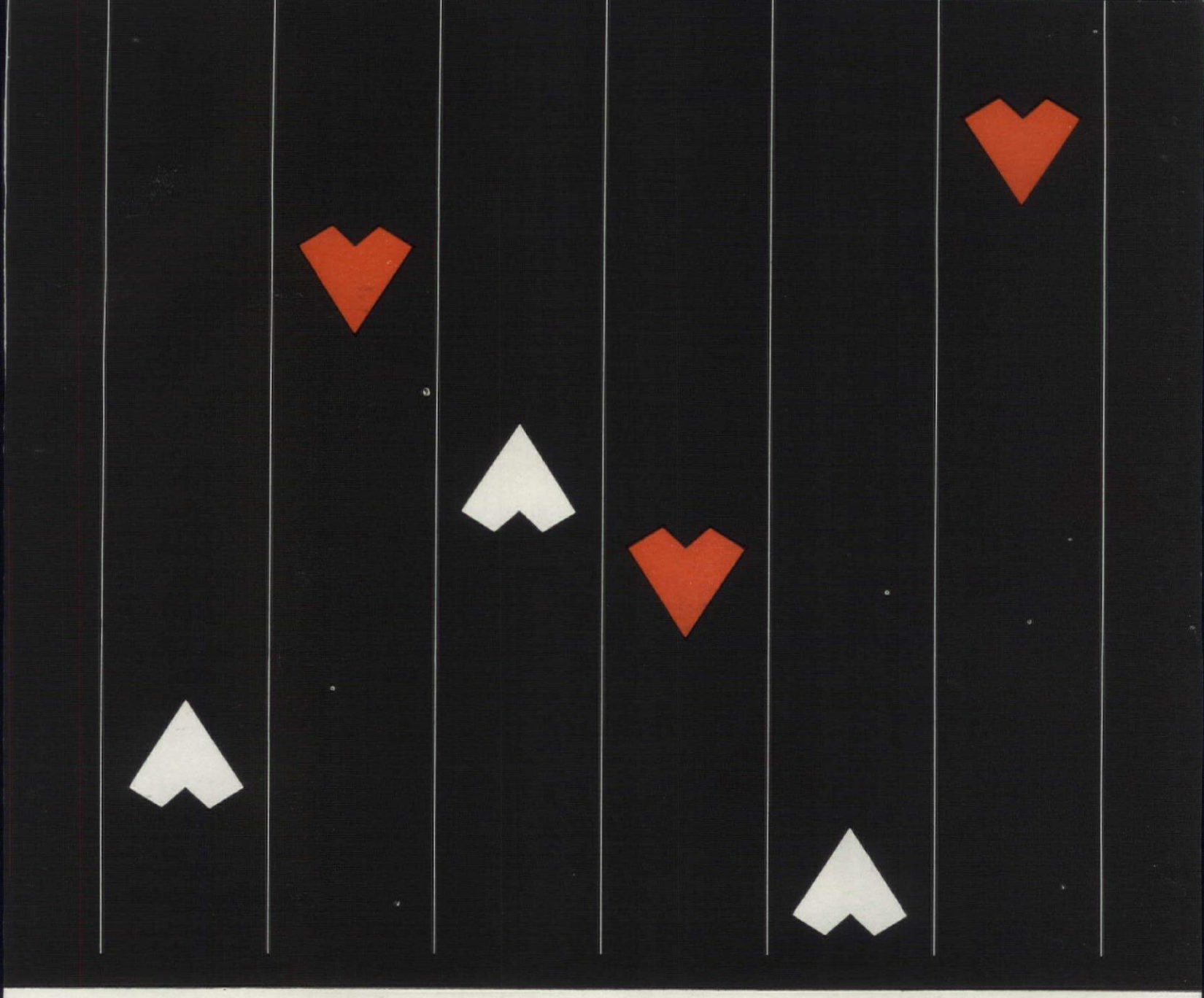
Note the modern practicality of its off-the-floor design. Can be mounted at any height. Conceals all plumbing . . . is easier to clean. Highest anti-splash back of any wall mounted cooler. Hand polished, stainless steel top can't rust, discolor, chip, or crack.

Check the superiority of Ebco On-A-Wall installations against central cooling systems. On-A-Wall proves to be more efficient in thousands of new buildings from coast to coast.

Full 5-year Ebco warranty. Precision engineering assures trouble-free performance and extremely long service. Warranty—best in the industry—covers all components.

Free vinyl sample on request. *Write to The Ebco Mfg. Co., Dept. 9-W, Columbus 13, Ohio, for actual Vinyl laminated steel sample in Silver Spice color. Free specifications and details of entire water cooler line for architects and engineers. (See Sweet's A.I.A. File No. 29-D-42)*

oasis
America's Preferred
WATER COOLERS
BY THE EBCO MANUFACTURING COMPANY



All over the building that welcome sign of an arriving elevator will be seen sooner than ever... with the new Westinghouse Selectomatic Mark IV control system. In-use tests proved this new system answers calls as much as 30.6% sooner than the most efficient elevator system before Mark IV.

Most significant, whereas conventional systems have tended to favor the top floors, Mark IV gives fast uniform service to all floors.

How does this remarkable new Westinghouse elevator system manage to answer all calls so quickly?

Unlike other elevator systems, Selectomatic Mark IV scans the entire building... matches calls to cars and decides in a fraction of a second where each car must go to give the fastest possible service.

Mark IV cars can reverse direction to go up or down, from any floor to any floor. They don't run on a timed dispatch cycle... don't make unnecessary trips to the top or the bottom of the building. They wait in-between ... answer calls as they come.

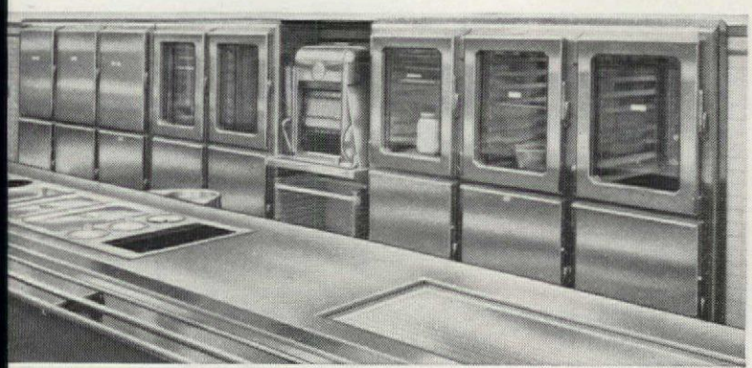
That's why, no matter where you are in the building or what the time of day, elevators arrive faster in a building with new Selectomatic Mark IV.

Selectomatic Mark IV is available for installation in 1962. Call your local Westinghouse representative for more information, or write to Westinghouse Electric Corporation, Dept. AI-99, Elevator Division, 150 Pacific Avenue, Jersey City, New Jersey. You can be sure... if it's Westinghouse.

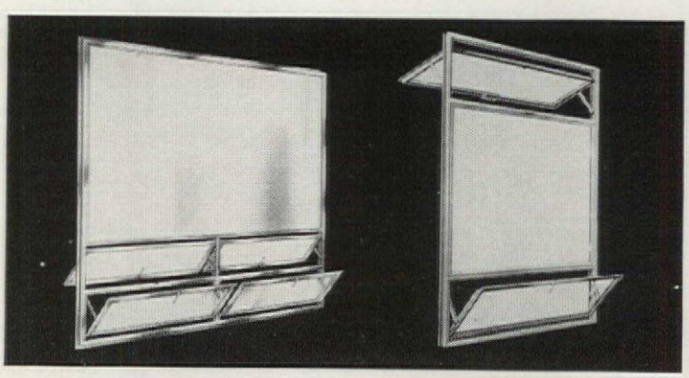
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Elevators by Westinghouse





BEAUTIFULLY BRIGHT for care-free cafeterias, kitchens, trim. Republic ENDURO® Stainless Steel is practical, durable, and attractive. Even worn surfaces have high bacterial cleanability equal to glass. Lends sparkling, decorative beauty anywhere—interior or exterior. Withstands abuse—has high dent resistance. Send coupon for application ideas.



BEAUTIFULLY RIGHT for schools and commercial buildings. Truscon Aluminum Windows are offered in the most complete range of types and sizes—a design to complement every architectural style. Polished white bronze hardware. Tight-sealing vinyl weatherstripping around entire vent perimeters. Send for specifications.

DESIGNED WITH KIDS IN MIND

...Republic Steel Lockers

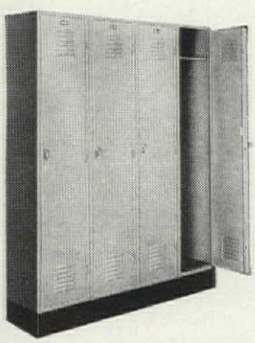
Begin with crisp, modern lines. Add functional design features—extra roominess, free-flow ventilation, snag-proof construction, positive latching. Built to last with double-leaf 2″ hinges, Bonderizing, baked-on enamel finish.

The result: Republic Steel Lockers—the lockers that are designed with kids in mind—the lockers you can specify with full assurance that they'll stay new looking, perform beautifully for years to come.

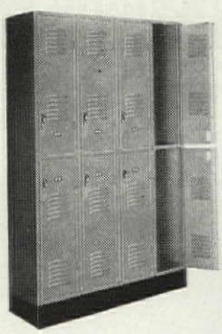
Steel
Strong,
Modern,
Dependable

COMPACT OR FULL-SIZED MODELS

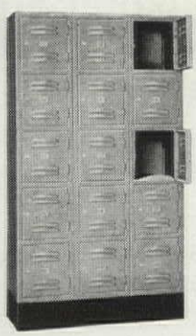
Beautifully built for every type of school requirement, too. Republic lockers are offered in the most complete range of sizes and styles available anywhere. Pictured are three of the most popular types.



Single-tier lockers. Sizes up to 18″ x 24″ x 72″ with a single door, or 24″ x 24″ x 72″ with double doors.



Double-tier lockers. For limited space locations. Sizes up to 15″ x 18″ x 42″.



Box lockers. Dimension variations depend on whether 3, 4, 5, or 6 tier styles are selected.

REPUBLIC STEEL

REPUBLIC HAS THE FEEL FOR MODERN STEEL

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Please send additional information on:
- ☐ Republic Steel Lockers
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- ☐ Republic ENDURO Stainless Steel
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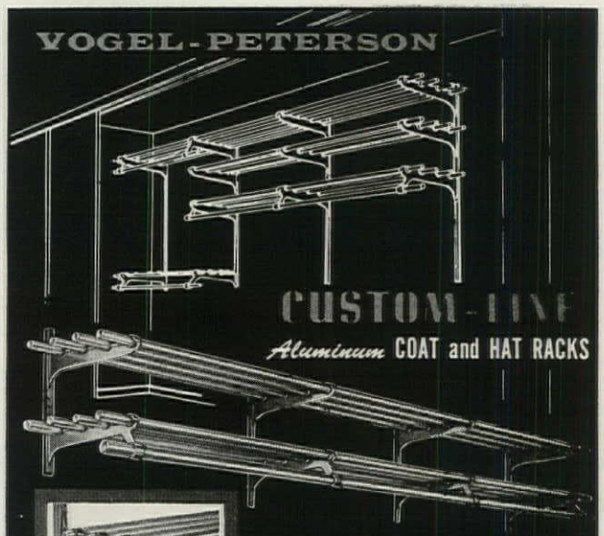
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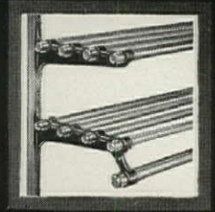
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CUSTOM-LINE

Aluminum COAT and HAT RACKS



Detail shows how dovetail extrusions (which mount on any centers) hold brackets at any desired height.

Tailored to fit any given open or closetted wall area. Smart in design and modern in "clear", "gold" deep etched anodized finishes and combinations. Quality built — closed-end aluminum tubing, rigidly held in cast aluminum brackets that are adjustable for height in dovetailed mounting extrusions. Brackets also adjustable to any desired centers.

Write for Bulletin CL-48.

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Garbage-Rubbish Chutes

A Profitable Investment You Can't Afford To Miss



Studies prove that Garbage-Rubbish Chutes, installed in multi-story apartment buildings, pay for themselves in 3 years. From then on, savings are clear profit!

How they save money!

1. By reducing payroll expenses.
2. By eliminating the need of rubbish storage space on each floor.
3. By eliminating use of passenger elevators for refuse removal.

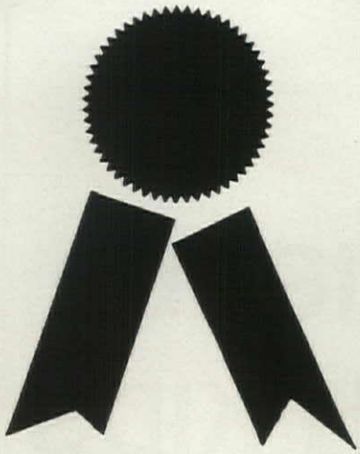
Attractive stainless steel intake doors can be hand or foot operated. Doors are self-closing and noiseless.

Plan your building for modern rubbish-garbage removal—with Wilkinson Chutes.

Write for details or see our catalog in Sweet's Architectural File

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619 East Tallmadge Ave., Akron 10, Ohio



34

In the last decade Architectural FORUM and its editors have received 34 editorial awards and honors. In all modesty, we think this makes FORUM the most acclaimed publication in the building field.

Among FORUM's honors:

5 AIA Journalism Awards

13 Industrial Marketing Awards

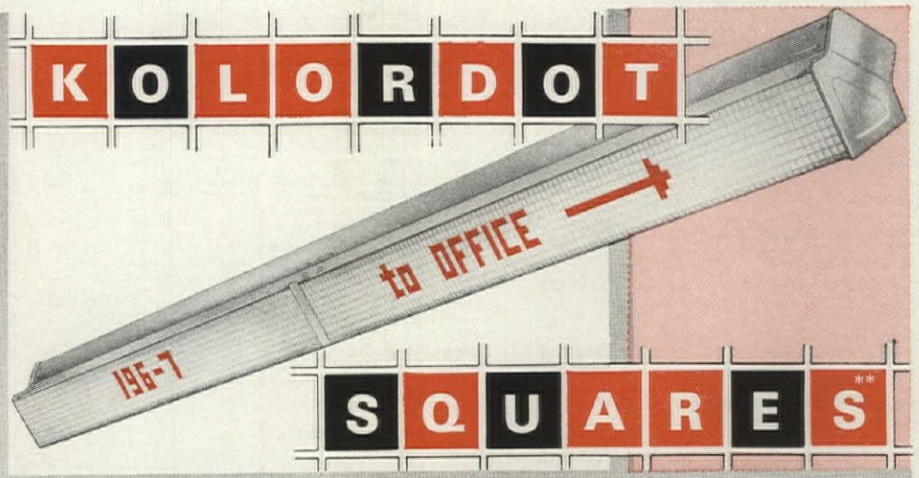
5 Jesse H. Neal Awards (ABP)

2 Howard Myers Awards (Architectural League of N. Y.)

If you would like to know more about these 34 awards, send for a copy of the Awards Booklet, Architectural FORUM, Room 1823, Time & Life Building, Rockefeller Center, New York 20.



ACCENT
the beauty
of Gratelite with*
GUTH
Kolordots



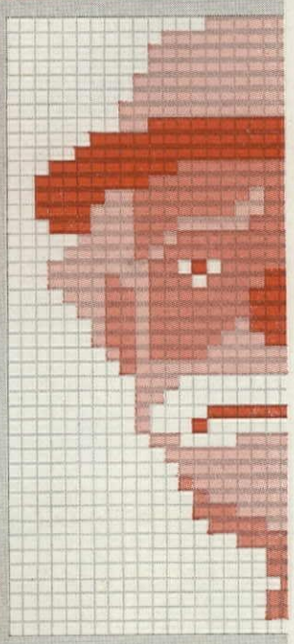
A new dimension of beauty in lighting. Functional and decorative!

KOLORDOTS . . . versatile as the artist's brush. Just "snap, snap, snap" and you see words and designs or mosaic patterns come to life against the luminous glow of Gratelite . . . in ceilings or fixtures.

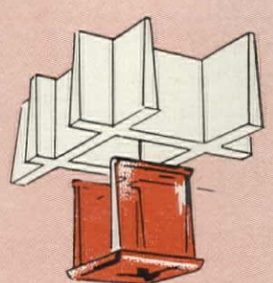
Four vivid colors — Sapphire Blue, Cardinal Red, Leaf Green and Vibrant Orange.

How can you use Kolordots? Just let your imagination go (and check the examples we show)!





KOLORDOTS
snap-lock
into the
⅜" Gratelite
cubes



in four vivid colors



Point out departments, designate areas or rooms, or just "play Picasso!" KOLORDOT SQUARES will add new sparkle and beauty to your Gratelite ceiling or fixture.

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LIGHTING
since 1902

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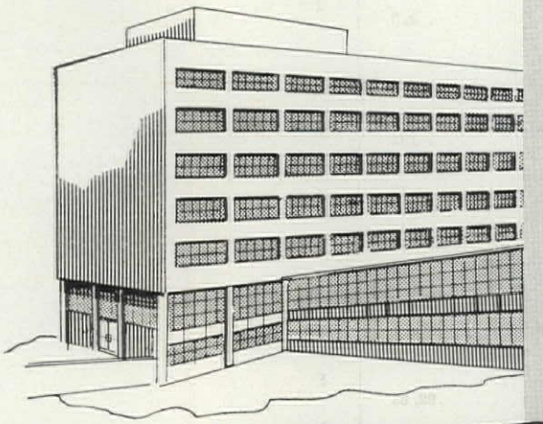
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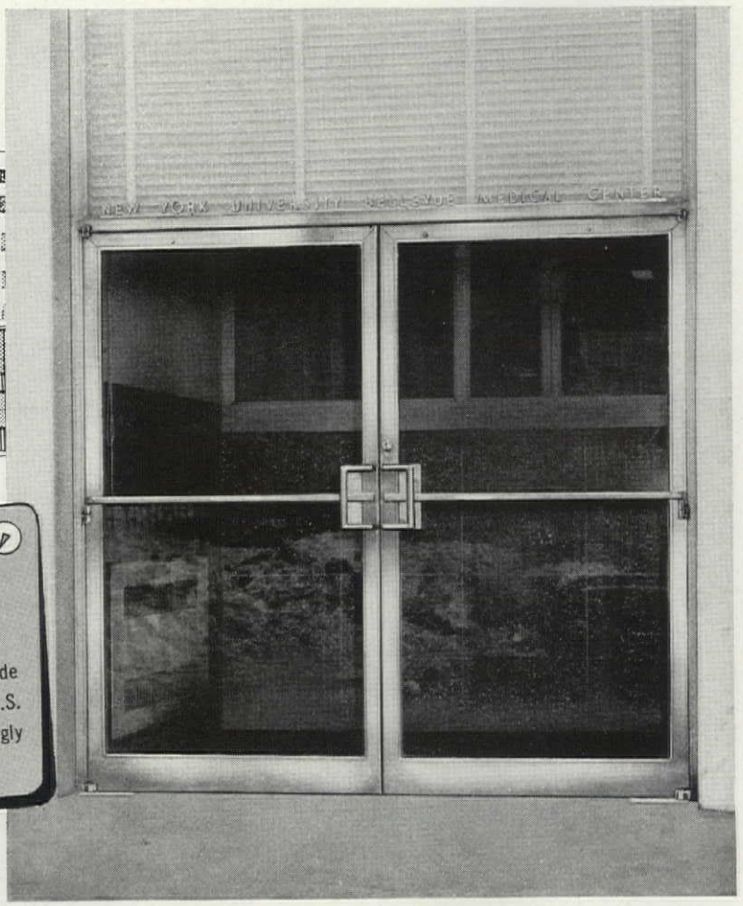
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No. 27 CLOSER solves door control problem at New York Univ. Medical Center in two-year test installation

"The first door control to stop glass breakage caused by strong East River winds..."
says **P. W. Barton,** CONSTRUCTION COORDINATOR





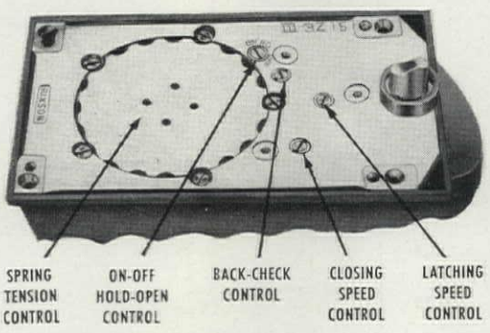
RIXSON® no. 27

TWO-YEAR FUNCTIONAL TESTS UNDER EXTREME CONDITIONS

This is one of twenty-two test installations of the No. 27 made approximately two years ago in locations throughout the U.S. and Canada where wind and other conditions were exceedingly severe.

Skidmore, Owings and Merrill, Architects

A COMPLETELY NEW DOOR CLOSER DESIGN
no. 27 offset hung **no. 28 center hung**



These New York University Medical Center south entrance doors are exposed to powerful East River winds which blow from *both directions*. Before the No. 27 closers were installed there was frequent glass breakage and closer damage.

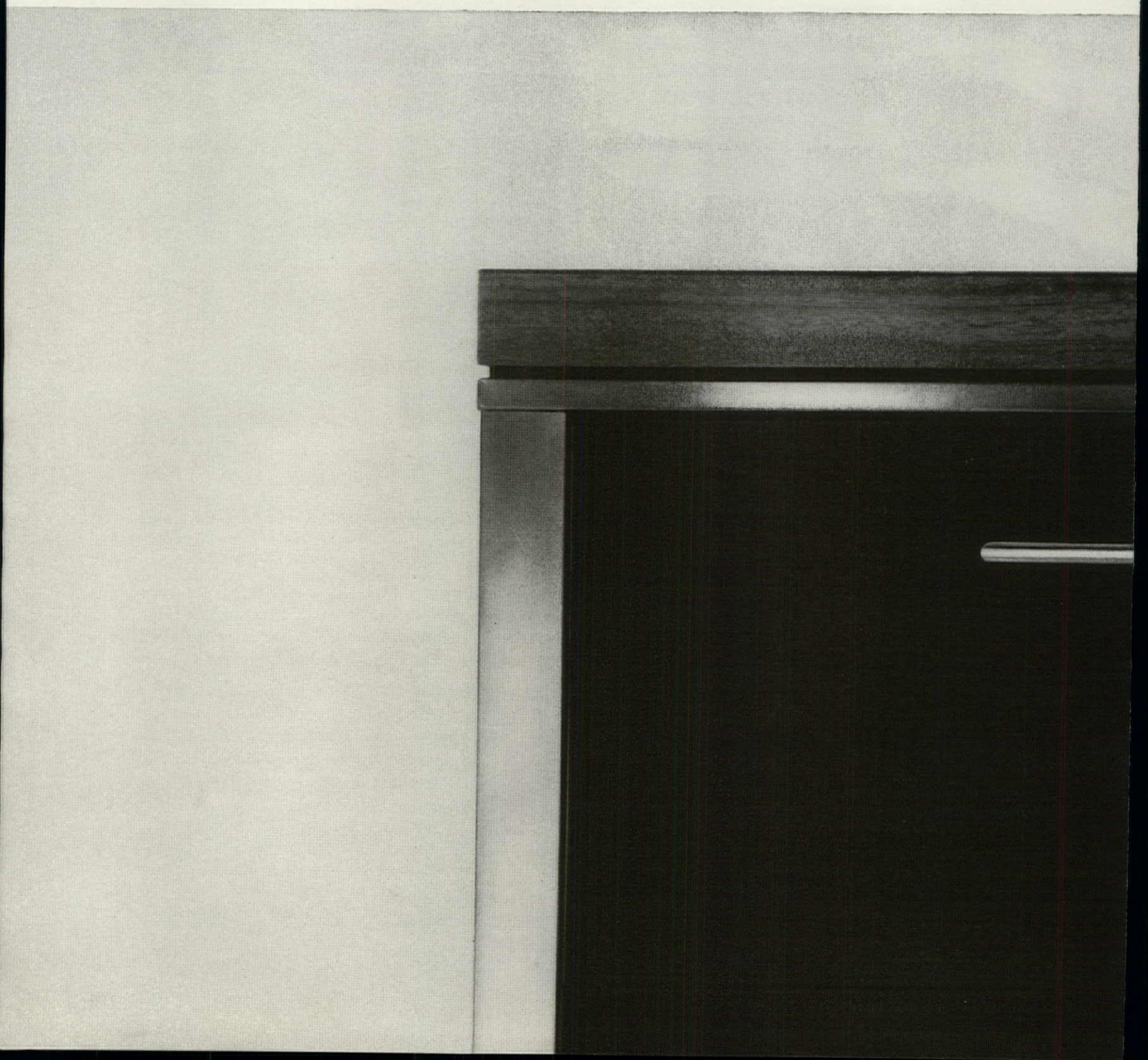
The back-check of the No. 27 closers, locally adjusted for *firm* resistance, together with the positive dead stop, now keep the opening action of these doors under constant control. The closing action of the doors is under dependable hydraulic check with closing and latching speeds each independently adjusted to cope with the wind conditions.

Complete literature and details on the No. 27 offset hung and No. 28 center hung closers will be mailed on request.

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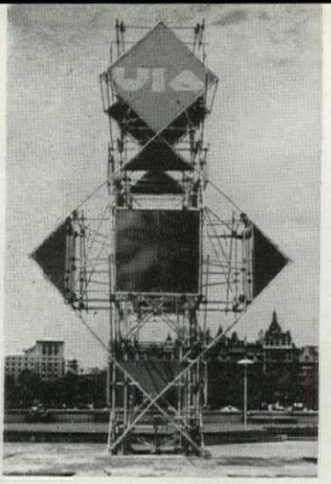


CORRY JAMESTOWN

Editor's note



BRITISH INFORMATION SERVICES



The reasons for this new department having been explained on page 1, let me without further ado drop a note on the Sixth Congress of the "UIA" in London, at which I happened to be the only visiting American journalist.

The initials stand for the International Union of Architects (as translated into French). This is the only world-wide body in architecture or building in which people from western countries can meet with professional colleagues from everywhere, including Russia and Red China.

Attendance was tremendous —about 2,000 counting wives —and British hospitality was even better than that. For the Congress, a neat, gay pair of temporary one-story headquarters pavilions was built close by the Festival Hall on the south bank of the Thames (photos). Theo Crosby, art director of *Architectural Design* magazine, designed them: a reception hall roofed over by aluminum pyramids, and an exhibit hall spanned by bar joists carrying a roof, if you please, of nothing but a sheet of vinyl plastic. This survived without a tear, and created wonderful light. In supplying Crosby, British industry contributed more to the theme "Materials and Methods as Influences on Architecture" than did most of the flowery discussion of the Congress itself. By common consent a fine job was done by Jim Richards, editor of the British *Architectural Review*, in his "summary." He called for a new kind of architectural performer who could take part in industrial development processes, these being fully as important to design progress as the design of fine individual buildings, which are so utterly dependent on better parts, constantly evolving. Incidentally, the 348 buildings or building groups assembled by Crosby to exhibit architecture in the technological age ran so parallel that they could hardly be identified as to country without a guide book, except that the Russian ones were a clumsy early functional.

Russian and Chinese delegates were generally most pleasant as individuals. Round-headed, dignified veteran Alexander Vlasov, and long-faced, dignified Yang Ting Pao were the leaders, the latter speaking cultivated English as a graduate of a leading U.S. university; Professor Hryniewiecke of Poland was friendly, relaxed, and smiling at London parties, as he had been at the Washington AIA Convention in 1957. Behind the scenes, however, the Reds had their Oxford contingent peddle ridiculous leaflets denouncing the "destruction of freedom" which was about to be "unmasked" by the people learning design through the "Progressive Architecture Movement" (not a magazine).

In a limping exchange with rank-and-file Chinese delegates I was told seriously how the graces of traditional Chinese architecture must be thrown away for an "industrial age." My own shop talk got translated, but an expressed respect for Chinese humor, as found in the famous fables of the "Monkey Born of a Stone" and his pilgrim's progress, fell on stone ears. Apparently there had been no instructions from Peiping on how to handle "Subject: humor." By the way, the next UIA Congress is to be in Cuba, followed by a Mexican tour, so Americans will have to practice some humor themselves, or something.

Parties were many and instructive, and the popular Monica Pidgeon, editor of *Architectural Design*, graciously helped an American colleague get to some of the nice ones. The *Review's* ebullient Reyner Banham was on hand with beat talk, i.e., out to beat the guy he was talking with. Gautam Sarabhai, the Indian industrialist and great patron of Le Corbusier, spoke of another new provincial capital in India to be started from scratch like Chandigarh. This puts the number of complete new cities started postwar at four in the free world, counting Brasília and yet another to be done in Venezuela. This last was announced later in Cambridge (Mass.) by the joint Harvard-MIT Urban Studies group. Architect-Planner Willo von Moltke and a team of social and economics experts are going down.

Lewis Mumford got the Royal Gold Medal of the British Architects and seems to have impressed the tough students of the Architectural Association—which takes some doing.

Among Americans present: Philip Will Jr., president of the AIA, with family; Henry Wright, VP; Ralph Walker, the stalwart UIA supporter; Henry Churchill, Vernon de Mars, Bucky Fuller, "Geeks" Kidder Smith, Max Brooks, Ed Fickett, Carl Koch.

With a whole week of sunlight London was toured like mad, and the greatest impression was made by London County Council housing, which Percy Johnson-Marshall was kind enough to show me, with thorough discussion.

Next time I hope to talk about the Harvard summer session on "The City and History." One thing learned: many historians do not believe history should be used to help in problem-solving. It just makes you think.

Douglas Haskell

